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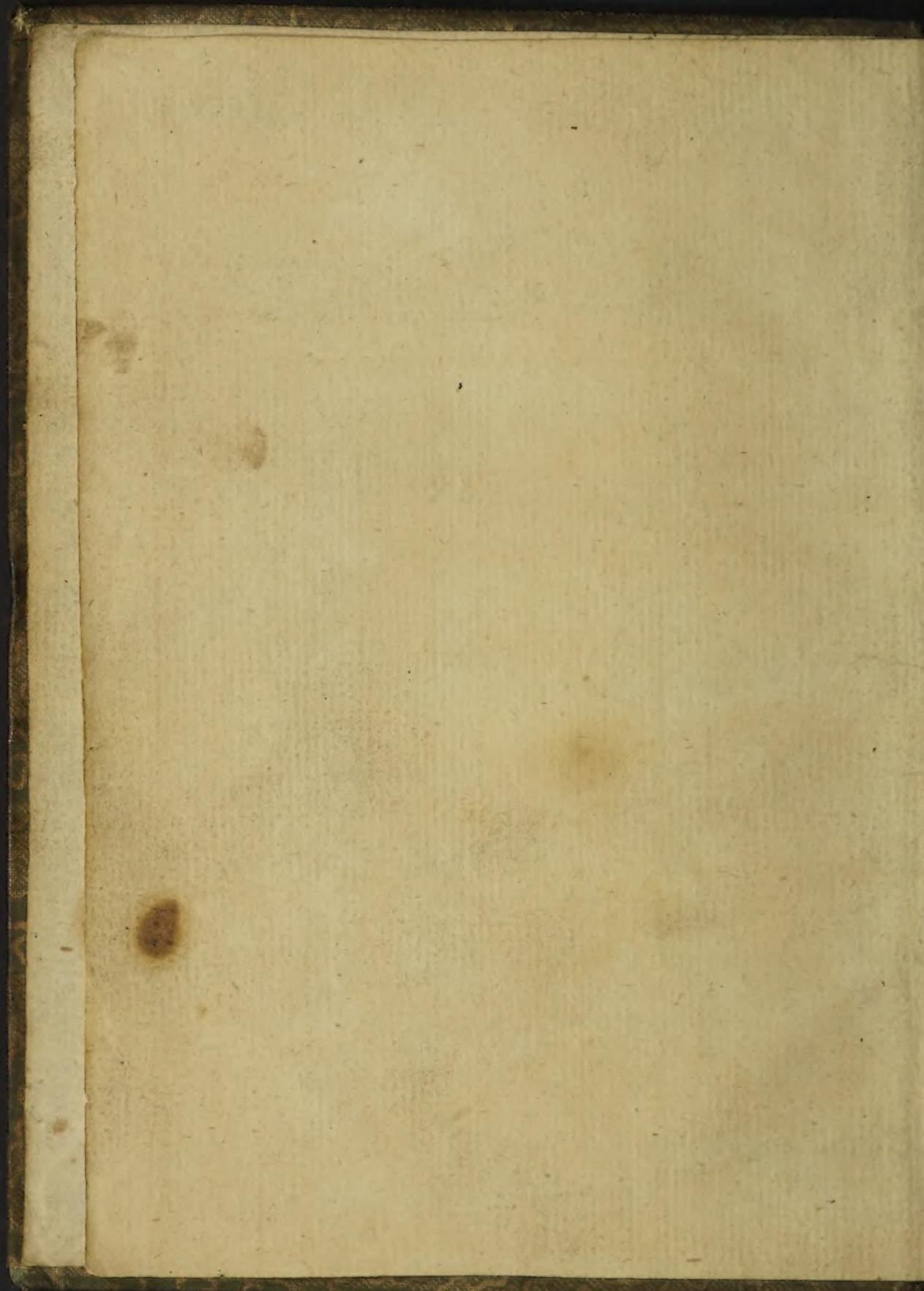
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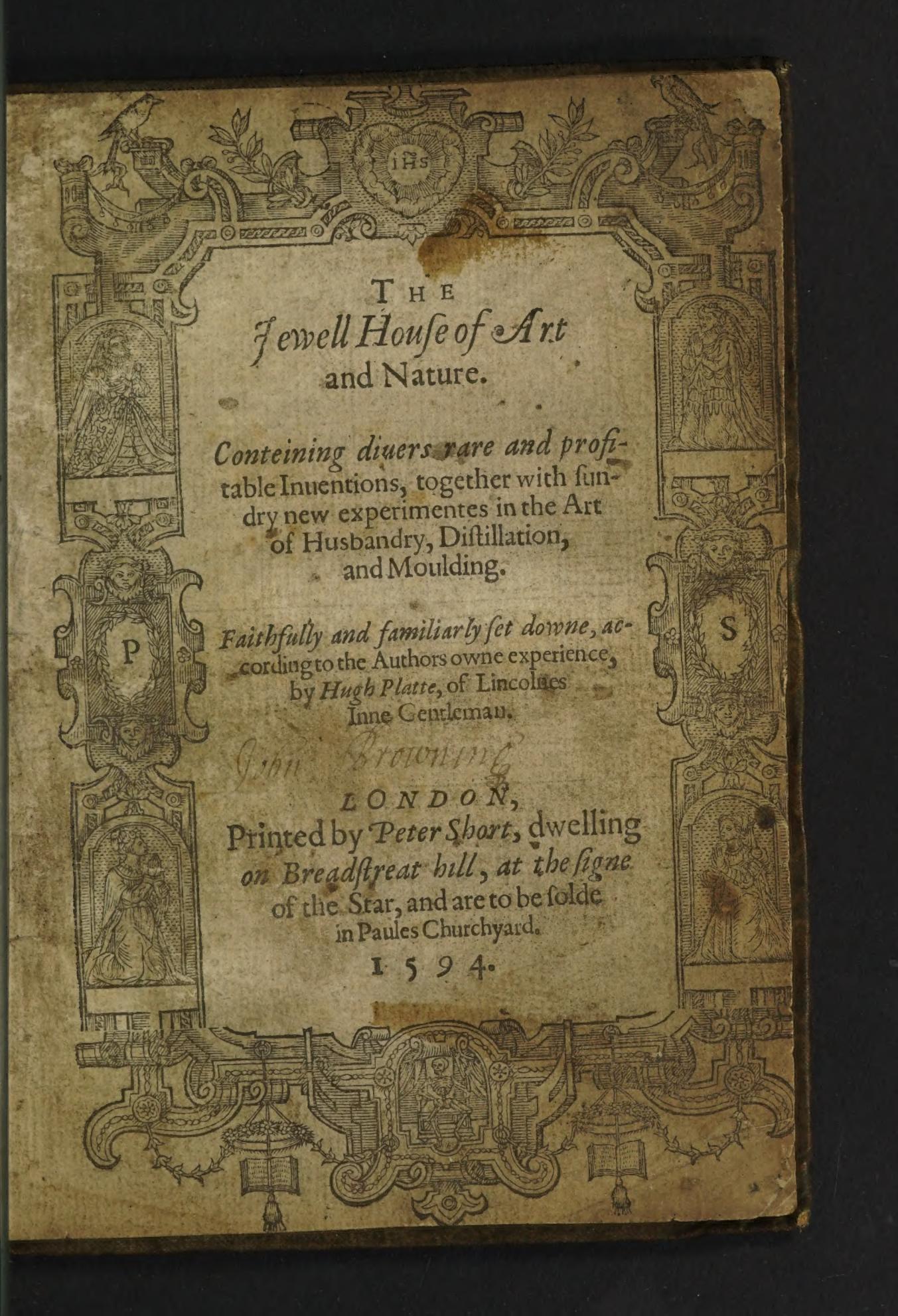
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THE Jewell House of Art and Nature.

Conteining diuers rare and profit-
able Inuentions, together with sun-
dry new experimenteres in the Art
of Husbandry, Distillation,
and Moulding.

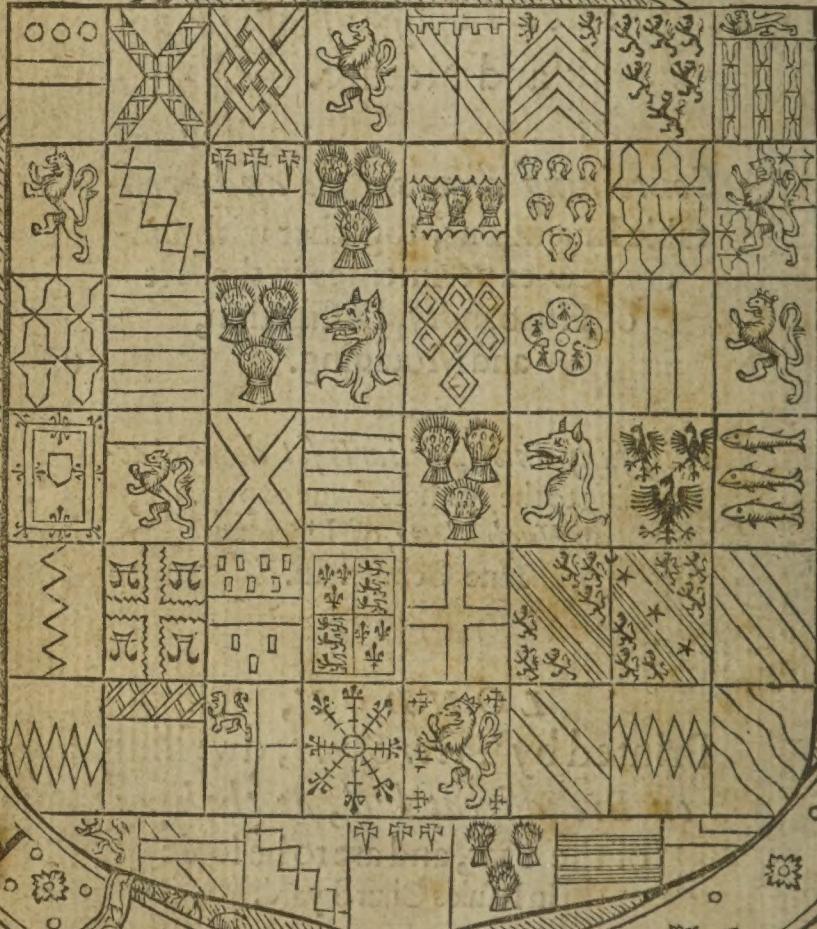
Faithfully and familiarly set downe, ac-
cording to the Authors owne experience,
by Hugh Platte, of Lincolnes
Inne Gentleman.

G. Hill Printed
LONDON,
Printed by Peter Short, dwelling
on Breadstreat hill, at the signe
of the Star, and are to be sold
in Paules Churchyard.

1594.



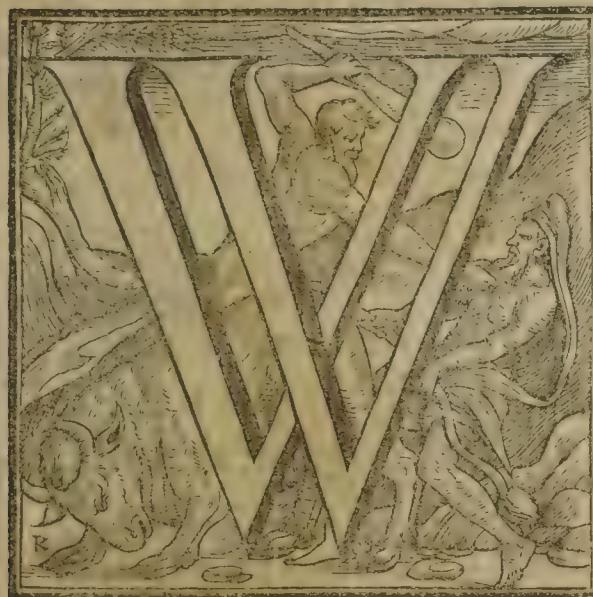
QUY : MAL



YOKI

PENSE

To the right Honorable, Robert
Deuorax Earle of Essex and Ewe,
Vicount of Hereforde, Lorde Ferrer of Chartley,
Borcher, and Louayne, Master of the Lucenes Maie-
sties Horse, Knight of the noble order of the Garter, and one
of her Maiesties Honorable priuie Councell, Hugh Platte
wisheth a long and happy life, with encrease
of Honour and vertue.



Hen I consider with my selfe (righte honourable) that the trew end of all our priuat labors and studies, ought to bee the begining of the

publike and common good of our country, wherein we breath and haue our being: I holde my selfe partly bound by the law of nature, & partly by the necessity of the times, to disclose and manifest, euen those secret and hidden magisteries, both of art and nature, which I had long since entered in a caske of marble, and are now (fearing some patent of concealements) ready to breake out of their tombes, and to pleade their owne tenures. And because in these daies of deepest

The Epistle Dedicatore.

censure, ech author of nouelties (be they neuer so really, & roially performed) is euery way in danger both of sharp, and sodaine reprehention, not onely of the base & vulgar sorte of people, that measure other mens conceipts by their owne; but of those also that haue had some better education, and been brought vp euen in the same schooles, yea and vnder the same Tutors with them. I am therfore bold (presuming vpon your honorable & accustomed fauors towardes all true louers of Art & learning, to deuote & consecrate vnto your honorable protection, the painefull and chargeable trauells of my youth, not doubting but that being shrowded with *Achillis* shield, they shal be able to endure al the thundring volees of shot whatsoeuer, that shall be bent or discharged against them. And thus resting secure vnder the shadow of so honorable a Patron, & hoping that your honor will inspire some life into these breathlesse ghosts of mine, which are thought to bee dead, and rotten longe since within the graues of obliuion: and wishing the ful accomplishment of all your godly & honorable desires, crauing pardon for my bold enterprise at this time, I rest.

Your honors in al duty to command,
Hugh Plat.



The first Booke conteineth, diuers new
and conceited experiments, from the which
there may be sundry both pleasing and profit-
able vses drawne, by them which haue either
wit, or will to applie them.

- 1 Ondry new and artificial waies for the keeping of fruites
and flowers, in their fresh hew, after they are gathered
from their stalks or branches.
- 2 A perspectiue ring, that will discouer all the cardes that
are neere him that weareth it on his finger.
- 3 How to carrie gold in a most secret manner.
- 4 How to keepe or preserue any fōule, or other peece of flesh, sound
and sweet, the space of three weekes, or one whole moneth togither,
notwithstanding the contagiousnesse of the weather.
- 5 How to defend fresh water a long time from putrifaction.
- 6 A marchants compasse, wheereby he may know vpon what point
the wind blowes, in his bedchamber, and in the night time, without
beholding the skie, or any vane abroad.
- 7 How to feed and fatten hens, chickens, geese, ducks, &c. in a
more cheap manner, then hath as yet beeene made knowne, or com-
mon to the world;
- 8 How to write a letter secretly, that cannot easilie bee discerned,
or suspected.
- 9 How to brew good and wholesome beere without any hops at al.
- 10 How to harden leather, so as the same shall last much longer in
the suckers of pumps, then it doth vnpreserved.
- 11 A conceited chafingdish, to keepe a dish of meat long hot vpon
the table, without any coles therein.
- 12 How to roast meat more speedilie and with lesse fire, then wee-
doo in our common manner.
- 13 To make a new peece of Walnut tree or Wainscot, to be of one
selfe same colour with the old.
- 14 How to turne fwe spits with one hand, whereby also much fire
is sauied.
- 15 A probable coniecture at the composition of hard wax.
- 16 To helpe venison that is tainted.
- 17 A pistol of two foot in length, to deliuere a bullet point blanke
at eight skore.

The Table.

- 18 A peece whereby to performe some extraordinary seruice.
- 19 To make greene wood to burne cleere, at the further end of the Ouen.
- 20 How to walke safely vpon an high scaffolde, without any daunger of falling.
- 21 A round ball of copper to blow the fire with.
- 22 How to erect or build ouer any brooke, a cheape wooden bridge, of forty or fifty foot in length, without fastening of any tymber worke within the water.
- 23 A cheape Lanthorne to carry a light in any stormy weather, without any defensatiue before it.
- 24 To plum vp an horse to keepe him from tiring in his trauell, and to make him foame at the bit.
- 25 A drinke for trauellers to bee made *Extempore*, when they want good beete or ale, at their Innes.
- 26 How to endure ones hand in molten lead.
- 27 To hold an hot iron barre in a naked hand.
- 28 Sweet cakes made without either spice or suger.
- 29 One candle to make as great a light as two or three.
- 30 Timber made to last long in water workes.
- 31 To close the chops of greene timber.
- 32 To graue any devise vpon an egge-shell, and to thorough cut the same.
- 33 An appearance of strange formes in a glasse.
- 34 Inke to be carried in the forme of a powder.
- 35 To write both blew and red letters at once.
- 36 Inke kept from freezing and molding.
- 37 How to draw any patterne by a deske of glasse.
- 38 Helps for the speedy attaining of the secretary hand.
- 39 To helpe Inke when it waxeth thicke.
- 40 To renew olde letters that are almost worne out.
- 41 To speake by signes onely.
- 42 Limming with colours drawne from flowers.
- 43 A ready way to learne the A.B.C.
- 44 To graue and inlay colours into al the mettals.
- 45 To make bad paper to beare inke.
- 46 To make an egge to stand alone without any helpe.
- 47 To harden the white of an egge into a gum.
- 48 A cheape candle or lampe for poore folks.
- 49 To refresh the colours of old oile pictures.
- 50 An excellent cement for broken glasses.
- 51 To drye gunpowder without danger of fire.
- 52 To draw fish to a certeine place in the night by a candle.
- 53 A baite to catch fish with.
- 54 To draw fish into a ramell.
- 55 Diuers good baits to catch fish with.

The Table.

- 56 A ready way to catch pigeons.
- 57 A worme to catch birds with.
- 58 To catch crowes, iackdawes, &c.
- 59 To kill Seapies, Seaguls, &c.
- 60 To gather Waspes.
- 61 To keepe garments and hangings from moath eating.
- 62 To helpe beere that sowreth or is dead.
- 63 To helpe a chimnie that is on fire presently.
- 64 To haue Seafish all the yeare long.
- 65 To make beere stale quickly.
- 66 To steale bees.
- 67 To make a tallow candle last long.
- 68 How to tell the iust number of Apples, nuts, shillings, &c, as they ly in bulke together.
- 69 To preuent drunkennesse.
- 70 An excellent tent for a Diamond.
- 71 Oyle or vernish made to dry speedilie.
- 72 To fetch out any staine.
- 73 To helpe wine that reboyleth.
- 74 How to make Bragget.
- 75 Clarifieng of hony in an excellent manner.
- 76 To make an artificiall Malmesie.
- 77 To keepe Gascoigne wine good, a long time.
- 78 To keepe Walnuts good and moist, a long time.
- 79 To preserue the glosse of Spanish leather.
- 80 To helpe smoking chimnies.
- 81 Tinder and matches sweet, and of a new kind.
- 82 An excellent mixture to scoure pewter withal.
- 83 To defend a horse from flies in his trauell.
- 84 To kill Rats in a garner.
- 85 To take away the offence of noisome vaults.
- 86 Sweet and delicate dentifrices, or rubbers for the teeth.
- 87 To helpe horse and man that is tender footed.
- 88 To keepe oysters good ten or twelue daies.
- 89 To keepe Lobsters, Crayfishes, prawnes, &c. good, and sweete, some reasonable time.
- 90 To make smooth or glistering floores or wals.
- 91 To make parchment transparent.
- 92 A cheape morter to be vsed in buildings.
- 93 A conceited drinking glasse.
- 94 To dissolve gold, and to part the same from gilt siluer.
- 95 To know when the moone is at the full by a glasse of water.
- 96 To melt downe iron easilie.
- 97 To put seuerall wines in one glasse.
- 98 The Art of memorie.
- 99 To make a conceited proiection either vpon Sol or Luna.

The Table.

- 100 To nip a glasse, Hermetice.
- 101 A Waggon to be drawne with men.
- 102 A delicate stoue to sweat in,
- 103 The Art of refining of Suger.

The second Booke entreateth of sundrie newe sortes of soyle or
Marle, for the better manuring of pasture or arable groundes, with
diuers conceits of Husbandry not heretofore published.

The third Booke conteineth, diuers chimicall conclusions, con-
cerning the Art of Distillation, with many rare practises and vies
thereof, according to the Authors owne experience.

The fourth Booke conteineth, the Art of molding, or casting of
any liue bird, or little beast, hearbe, or flower, or of any patterne of
mettall, wax, &c. into golde, siluer, plaster, &c.

The last part, is an offer of certeine new inuentions, which the
Author wil bee ready to disclose vpon reasonable considerations, to
such as shall be willing to entertaine them, or to procure some pri-
ledge for them,

F I N I S.



THE PREFACE OF THE Author.



Because in my late Apologie of certeine newe Inuentiones (which I have thought good as indiuidua of one and the selfe-same Species, to annex and combine with this concited Treatise) I made a condicionall promise, of some farther discouerie in arteficiall conceipts, then either my health or leisure would then permit: I am now resolued (notwithstanding the unkind acceptation of my first fruits which then I feared and hath since falne out, is a sufficient release in Law of the Condition) to make the same in some sort absolute (though not altogether according to the fulnesse of my first purpose) and to become a building word unto me. And I am the rather perswaded hereunto, that I might both second my first labours with a fresh supplie of credit, as also for the better satisfaction, or rather suppression of all those professed enemies of ingenious deuises, who notwithstanding those manifold and inauoidable testimonies produced in the same Apologie, for the better supportation of such offers as are therin most sincerely propounded, and doe yet rest at all times (vpon reasonable condicions) to be as royllie performed, doe neuert helesse without all wit, reason, or humanitie, not onely make a question of the possibility of them, but as occupying the seats of Judgement, (wheras some of them haue as yet bin scar selie Scauengers in the Warde, many of them not yet come to a face of Foines, most of them understanding no more Latine then Nouerint vniuersi, and none of them able to moderate a Logique question in the Sophisters schooles) haue both vtterlie condemned

B them

The Preface

them in their owne conceipts, and pronounced their fatal sentence upon the, in the midst of much sacke & sugar. Yet herein I must of necessitie allowe of their graue wisedoms, who being not able to rule their rash and riotous tounges, haue alwaies shewed so great a gouernment ouer their enchanting purses, as that at al times when the question came to be tried by any round wager (which hath beene oftentimes offered them in my behalfe, and shal stil bee maintained in despight of their ignorance) they haue presentlie shifted themselves by an Apostrophe to a new matter, as if they had spoken unawares they knew not what.

Now I see that saying of Hierome to be verified in our daies. Nil tam facile, quam otiosum et dormientem de aliorum labore & vigilijs disputare. There is nothing, saith Hierome) more easie then for him that is idle and sluggish himselfe, to argue and reason vpon other mens labours and watchings. But to leane these leaden daggers with their golden sheathes to the Cutlers shops, where they would make a goodlie shew, if they were hung up in a Michaelmas Terme, let vs see (since the former ages haue brought forth and perfected, so manie rare and inestimable inuentiones for the vse and benefit of man) what cause we haue to despaire in our wits who are alreadie ful fraught & furnished with their industrious labors, and yet haue the benefit and aduantage of our owne conceiptes to multiply al those learned lines which they haue left behind them. Why then should we think so baselie of our selues and our times? Are the pathes of the auncient Philosophers so worne out or ouergrown with weeds, that no tract or touch therof remaineth in our daies whereby to trace or follow them? or be their labyrinths so iutricate, that no Ariadnes thread wil wind him out that is once

of the Author.

entred? I cannot think, much lesee beleue, that Nature hath dealt so niggardly with al the world besides, as first to make her staples and storehouses of skill and learning, onely within Aegypt or Greece, and then also to cut off all trade and traffique with them from all other Nations. Nay rather, why should not little England (whose Angli are so called quasi Angeli in the opinion of som that are learned, and for whose good, the great and mighty Iehouah, hath opened euен the windowes of Heauen and powred downe such plentie of his richest blessings) seeke to raunge her selfe in the foremost rankes and troupes of all Mineruaes crew, and not onlie reach with a victorious arme at the golden fleece, in despight of all the fierie Bulls of Thessaly, but also wrest and wring the victorie, euен out of the victors hands.

And were it the good will and pleasure of her most sacred Maiestie (who with a most princelie and prosperous hand, hath hitherto borne up hir sword and scepter in despight of all her forren and domestical foes) to propound some liberall stipende for all such of her ingenious Subjects as shoulde bring forth any profitable or rare particular, for the general good of his prince and Country, I would hope to see a new revolution of the first golden age, and that some Polydor woulde be forced to write a fresh volume of new English Authors, which shoulde make the antient Poetical Gods to be their foiles, and to yeelde up both their crownes and Scepters unto them. But now I may iustlie saie unto England, O thou little Island, were either thy manifest wants, or thy secret and hidden treasures sufficientlie knowne unto thy selfe, thou wouldest then as earnestly embrace the one, as thou doost now insensiblie passe ouer the other: yeathou shouldest neither enuie Spaine for hir riches, nor flatter her for her commodities, nor feare her for all the inuincible Navies that

The Preface

she could prepare and set forth against thee. I dare boldly say and constant lie affirm, that as our country dooth afford many carefull fathers that dailie perform their best endeouours for the weale publike, and many heroicall and martial men, whose undaunted corages haue sufficiently manifested themselues, both at home & abroad, so yet there remaine a secret number of choice wits, who being full fraught of more necessarie, yea more inualuable commodities, then either the East or west Indies are able to affoord, are neuertbeles forced to consume their daies in melancholie, & (almost to the hazard of their soules) to burie their talents in the bottomles pit of obliuion. Sed quid ego hæc vobis nequidquam ingrata reuoluo? Dies dabit, quod dies negat. And there I will cast my anchor for this time. Now to the subiect we haue in hæd.

It may seem a matter right straunge and admirable to al the excellent Artists of our age, that a yong Nouesse in the schools of Philosophie, a slender Husbandman in the rights and ciuitie of the ground, a man of ciuill education, that hath drawn the longest line of his life within the lists and limits of London, should now (in these florishing though unrewarded daies of skil & knowledge, & after so many editions of such excellent Authors concerning the same subiect) presume to bring forth a volume of new inuentions, whose noueltie might delight the delicate cares of a few, and whose profitable practise might sufficiently satisfie both the labor and expectation of many thousands. But when I consider with my selfe, that the God of Nature and knowledge (when it pleaseth himselfe to vschis own meanes) is bound to no age, profession, or estate, and that the best wits of our time, are fallen into a deep slumber, or rather into a deadly sleepe, by an excessive dose of Anodium specificum which they haue greedily swal-lomed that they might the better passe ouer these ingrate

of the Author.

full and barbarous daies in extream silence and obliuion,
I am the bolder I say (taking the aduantage of the time,
and being vrged by the great & manifold wanies of my
country, that dayly present themselves, & cal and cry for
help at their hands, who haue or can find out any meanes
of succor or releefe) to offer and present unto my country
amongst many other delightful and pleasing experimēts,
some profitable practises both of Art and Nature, and a-
mongst those, some being also of such kind and qualitie as
might best sort, the most painfull, the most poore, and the
most necessarie members of his land, that therby I might
bring that good and commendable purpose of Virgill to
some measure of perfection, vt quamuis auido parerent
arua Colono, and so conclude also with the Poet, Gra-
tum opus Agricolis. For what eie doth not pitty to see
the great weaknes and decay of our ancient and common
mother the earth, which now is grown so aged & striken
in yeares, & so wounded at the hart with the ploughmās
goad, that she beginneth to faint under the husbandmans
hand, and groaneth at the decay of hir natural Balsamū.
For whose good health and recoverie, and for the better
comfort of sundry simple and needie farmors of this land,
I haue partly undertaken these strange labors, altogether
abhorring from my professiō, that they might both know
and practise some farther secrets in their husbandry, for
the better manuring of their leane and barren groundes
with some new sorts of marle not yet knowne, or not suf-
ficientlie regarded by the best experienced men of our
daies, or the most religious worshippers of the Goddess
Ceres. In which discourse, as the rustical people & plain
clouted shooes, shal happily find som varietie of soile in su-
dry places where their ordinary dung doth faile them, so
those which are ingenious, may gather philosophicall mat-
ter enough, to stirre up their sharpe wits to a higher con-

The Preface

temptation of Nature, then the bare letter dooth import.
And because neither Albertus Magnus, Alexis of Piemont, Cardarus, Mizaldus, Baptista Porta, Firouanta, nor the rest of that Magical crew, nor yet Wickerus, that painfull gatherer and disposer of them all, should here be objected as a matter of terror unto al new professors of rare & profitable inuentions, I haue thought good (for the better satisfaction of the wiser sort) in a word or two to set downe some of the wants of those ancient Authors (for what one man could euer attaine to al things in their ful perfection) which no doubt are left for the Neoterici and later writers of our age to supply & furnish. First of al I doo find the most of these Authors in Latine, French, or Italian, wherby the vulgar sort of people, who haue most need of some profitable inuentions to helpe them, can not possiblie put them in practise, although al which they haue written had bin true. Second lie for that I think that most of their friendes and followers (although good Latinists) doo nowre at length suspect and charge many of them with much vntruth in their best and most especiall receipts, although in matters of ordinarie distillation, sublimation, calcination, &c. of their Arsenick, Antimonie, Mercurie, and the rest of the seuen bodies in their violent maners, and for those grose uscs wherin they are most emploied, as also in their handling of bewties, coulours, perfumes, and such like, manie of them haue dealt faithfully enough, although not so ful lie, but that they may well endure some newe additions both in matter & in the maner of their discourse. Third lie, some of them haing written diuers particulars, only by a theoretical and speculatiue kind of contemplation, and not drawne from the infallible grounds of practise, haue published whole Volumes by imagination onely, in their priuate studies, which when they come to be tried either in

of the Author.

in the glowing forge of Vulcan, they vanish into smoake, or to be committed to the earth the common mother of all inferiour creatures, they bring forth nothing else but ordinary fruit, not answerable either to their promises or to our expectations. Others are so astronomicallie conceipted in their rare and admirable magisteries, which they intreat of, as that if the practiser being very religious both in the letter and sense, & yet not performing the secret when hee hath doone his best, they would perswade vs that he hath not made his true election of the season and planetarie hoare wherin to actuate so great a mysterie. But the best and most approoued Authors of the rest, haue written al their learned experiments so figuratiuelie, and wrapped them vp in such clouds of skill (and that maketh them so often to tel vs, Scribimus nobis & Philosophis, scribimus filijs artis, calling their minerals by the name of Aurum nostrum, mercurius noster, stibium nostrum, &c) as that no man, without a manuel maister that may euен lead him by the hand thorough al their riddles, is able either to make the sweete oile of Antimonie, or to dulcifie Mercurie as it ought to be, or to bring any mettal to be medicinable by making it irreducible to it selfe. Here hence it commeth to passe that the most part of our chymical and paracelsian practisers, not being able to open those fast locked bodies of the mettals, wherby to make them by many rotations so volatile as they ought, do therefore giue them in their grosse Natures, with their earthy and poisoned parts, not beeing able to make a true and philosophicall diuision of them. And yet perswade themselues, that they haue greatlie profited in Hermes school, because they are able to make Oleum sulphuris, Oleum vitrioli, flores & vitrum antimonij, Flores sulphuris, crocum Martis, and manie sorts of precipitate, and of late a Borax christalinus, with their

The Preface

their Anodinū specificum, but wanting both Oleum solis and the oile of Pearle and Coral, which considering the maligne qualitie both of Opium and Hyoscyamus without those helpers, I knoyme not with what warrant they dare minister the same so often as they doe. Seeing then, that al these ancient & new Magicians (notwithstanding their studious endeuors & inestimable expence both of time and treasure) durst never as yet presume to rase out that olde enuied sentence Plura latent quam patent, being written in capitall letters, by the hande of Nature, euен in the forehead of the least and meanest of al her creatures. Why shold not I, hauing spent som of my sweetest hours in reading, & many of them in conference, and more in practise, but most of al in contemplation, in regard of al my charge & trauel, aduenture as boldlie as the rest, to commend the flowers of my yOUTH, to the courteous view of al well disposed Readers, who may either to their great good make vse of my labors, if they haue beene wel bestowed, or else by my example learn to employ both their wittes and time in a course more commendable for themselues, and more profitable for their Countrey. Yet presuming of their fauorable censures (notwithstanding I must leaue the same in equal ballance for a time) & aduenturing to measure other mens delights by mine own, I hope I shal find no Stoick so seuer, but that I shall content him in some one particular at the least (if not in the general subiect of my book) which he may either for his necessitie, or for his pleasure be willing to embrace. But now it is high time for the prologue to giue place because the Actors are at hand, who are readie to present such choice and varietie of matter, as that notwithstanding they may happily faile in gesture or action, yet I doubt not but that they wil either procure a friendly & thankefull plaudite, which is the most that I can desire, or a most free & liberal pardon, which is the least that I can deserue.



Diuerse new and conceited Experiments, from the which there may be sundrie both pleasing and profitable usses drawne, by them that haue either witte, or will to applie them.

Sundry new and artificial wayes for the keeping offruits and flowers, in their fresh hew, after they are gathered from their stalkes or branches.



Use new fourmes of Lead to be made, either round or square, that may fit the bignes of your flower, or fruit which you meane to keep, in euerie of which fourmes place one flower, Cherrie, Plomme, or Peare, hanging by the stalke in such maner as it grew, let these fourmes be well fitted with their apt couers, and sodered verie close with safte Soder which will runne with a small heate, so as no aire enter, bury them deep in a shady place, where the Sunne may worke no penetration. Some commend a sandie, and some a grauellie ground, aboue all other for this purpose, but if they be well sodered, I thinke any ground wil serue the turne, or if you think good, you may hang them by lines in some coole and running brooke. Or else you may put euery seuerall fruit or flower in his seuerall earthen pot well

C leadsd

leaded within, and couered with earthen couers, well burnt & leaded likewise, cementing or closing them togither with the Goldsmithis waxe or cement, consisting of stone-pitch, rosen, powder of bricke, and such like (although some content themselues with molten Brimstone, and others with yellow waxe and rosen, molten and well wrought togither.) These little pots you must place within greater, and these greater within vessels of wood, stopping vp cuerie breathing place that you can imagine (for here I can assure you that the aire will be a player, vnlesse you can keepe it out of the Alley perforce.) If you would afterwardes burie these wooden vessels, then were it requisite to pitch them well, both within and without: but if you meane to place them onely in coole and fresh vaults, or Sellers, then may you verie well spare this defensatiue, so as the caske be strong and tight of it self. Yet some commende the keeping of fruite or flowers in Glasses made of purpose for them, to be the best of all others, so as the Glasses bee made with long neckes, and bee nipped (*hermetice*) with a paire of whote tongs, the maner whereof you shall find hereafter set downe *num. 100.* I dare not commend in anie high tearmes, the dipping of fruite in wax well tempered with some Turpentine, Pitch, Rosen, sweete suet, or Barrowes greace: where also some woulde haue the fruit first wrapped in paper, to keepe it the cleaner, although I know there is somewhat to bee performed this way in some kinds of fruit which begin to rot frō the outward partes inwardly. But if the fruit begin to rot first at the Core (as the Katherin peare, and diuers other sorts of fruit doe) then all the outward couers and enclosures whatsocuer (yea though they were dipped in dissolved Ambre which is counted the purrest

rest and most defensatiue garment of all the rest) will
neuer be able to turne Nature out of her bias. Here
also some sharpe wittes haue imagined that if spirit of
wine wel rectified, were glutted with thimbibition of
anie flower, vntill it coulde worke no more vpon the
same, that thereby it were possible to preserue anie
flower of the same kinde, a long time therein. But this
is to bee vnderstoode onely of the drie leaues which
bring nothing else but the Tincture and strength of
the hearbe with them, and not of the moist leaues
which will leauue a putrifying phlegme behind them,
which in time will helpe to corrupt the spirit. Nowe
me thinkes I see a whole troupe of gallant dames at-
tending with their listning eares, or rather longing
with their great bellies, to learne some newfound skil,
how they may play at chopcherrie, whē cherrie time
is past. Wel, to giue these Ladies some content, I will
vnfolde a scroule which I had long since as carefully
wrapped vp as euer any of the Sybels did their fatall
prophesies, wherin I will make them as cunning as
my selfe (sauing onelie that I will reserue one strange
venue to foile a scholler withal if need be.) The secret
is short, let one element be included within another,
so as the one may haue no accesse nor participate
with the other. But this paraduenture is too philoso-
phical for women. Then receiue it Ladies with plaine
tearmes into your open lappes. For want of Glasses
with broade skirts (whereof notwithstanding I doe
thinke there are inough to bee had if you can bee so
gracious with master Jacob of the Glashouse) caute
new Pewter vessels of some large content to be made
and of the fashion of bell Saltellers, with diuerse eies
or hookes hanging in the inside, at the which you
must fasten the Cherries, by their stalkes, and hang
them

them so as that one maie not touch an other, the skirts of which vessels you must compasse with leaden rings of such weight as may be able to presse the downe to the bottome of some leaded panne, wherin you must place them, hauing first filled the panne almost full with fayre water prepared as is heere set downe *num. 5.* least by putrifaction of the water, the Cherryes also beginne to putrifie vwith it. Yet heere you muste bee carefull that the Cherryes hang within the ayre of these inner Vesselles, not touching the Water, which may happilie rise one inche or somewhat more within the innermost skirtes of them. And thus the ayre beeing kepte coole, and defended from chaunge (vvhose alteration from heate to colde, and from moysture to drinessse, is the principall meanes of the ruining of all mortall bodies) will preserue such Cherryes as it receyueth in charge for two whole Moneths at the least as I haue long since prooued. And peraduenture if you make choyse of sounde fruite gathered after two or three fayre dayes togither, the deaw being sufficientlie drawne from them by the Sunne, you may yet keepe them somewhat longer. But the onely pleasure of this secrete is perfourmed in Glasses through whose perspicuitie after some reasonable quantitie of water first remooued or deuided, one may discerne weekely in what plight they are. It seemeth very probable, that if Cherries as they hang vpon their braunches, and before they come to their full maturite, were included in an earthen vessell of some receiptre, hauing a partie couer with a hole in the middest, deuided into two equal partes, and enerie breathing place well stopped or luted, and the Sunne suffisiently defended from the pot, that so the

the fruit woulde keepe fresh a long time vpon the tree whereon it groweth. This secrete extendeth generallie to all fruite . And it is not much vnlike to the spreading of a Tent ouer a Cherrie tree about fourteene dayes or three weeks before the Cherries were ripe, practised by a Surrey knight not many yeares sithence, whereby he did greatly backward the tree in his bearing, now and then watering the tent in a sunnie day with colde water , whereby the strength of the Sun beames became verie weeake vpon the tree, and when he was disposed to ripen them speedily, he withdrew the vaile, giuing a freer passage to the hote and scorching beames of Phœbus. By the helpe of some one of these, or of some other of the like kinde and qualitie it was my happe to present vnto sir John Allet L. Maior of the Citie of London 8.greene and fresh Artichokes vpon the twelfe day, with a score of fresh Orentes, which I had kept from Whitsuntide then last past, at which time I was also furnished with 200. Artichokes for mine owne prouision, which continued a seruice at my table all the lent ensuing, to the great contentment of sundry of my ghestes who would haue bin right glad to haue dined with the secret onely. It may be that at my next impression I will impart the same, as also the true & perfect ordring of the rose tree, whereby wee may haue the flowers to bud and blow when all other roses haue made an end of bearing. Which conclusion I haue inserted in my conceyted booke of gardening, wherein I haue set down sundrie obseruations, which neither M. Tusser though hee haue written shapely , nor Master Hill though hee haue written painfully, nor Master Barnabe Googe though hee haue written soundlye , applying himselfe in his vwhole discourse both to our soyle and Clymate , hath as yet discouered to the world,

world, though peraduenture he may know them as well as I, and reserue them for himselfe, and for his secrete friendes. All which are readie for the Presse, and doe onely attende to see if Noahs Pigeon will returne with an Oliue branch, seeing his Rauen hath as yet brought nothing with her.

2 *A perspectiue Ring that will discouer all the Cards
that are neere him that weareth it on his finger.*

A Christall stone or Glassie of the bignesse of a two pennie peece of siluer, or thereaboute, beeing the iust halfe of a rounde Baall or Globe, and cutte hollow within, hauing a good foyle sweetlie conueyed within the concave superficies thereof, and the stone it selfe neatly polished vwithin and without, will giue a liuelie representation to the eyc of him that weareth it, of all such Cardes as his companions which are nexte him doe holde in their handes, especiallie if the owner thereof doe take the vpper ende of the Table for his place, and leaning nowe and then on his elbowe, or stretching out his arme, doe applie his Ring aptlie for the purpose. I haue discouered this secret rather to discorage yong Nouesses from Card-play, who by one experiment may easilly gheesse, how manie sleights & cousonages, are dayly practised in our dicing and gaming houses, not doubting but that the general publication thereof wil make the same so familiar with al men, as that I shall not iustly be charged of anie to haue taught old knaues newe schoole-pointes. This secrete is as yet meerly Freuch, but it had beene long since either denized or made English, if there coulde haue beene found any sufficient workman amongst vs, that cou'd haue

haue foyled the stone so artificially as it ought to bee. There be some English knights that can sufficiently testifie the truth hereof by that which they haue seen amongst the French gamsters.

3 Howe to carrie Gold in a most secrete maner.

Melt downe some Golde, and mixe therewith a sufficient quantitie of Leade (but then you shall bee forced to test the same before you can recouer your Golde againe,) and this is the most secret waie of all the rest, because there will bee no shewe or apparaunce of Golde eyther within or without, but the separation vwill bee somewhat troublesome. But if you vwoulde carrie golde about you in such manner, as that vwithout anie other mans helpe, you maie deuide the Golde your selfe from the mettall vwherein you conuey it, then cast bullets of Golde in a Pistoll molde, vwhich you may so aptly hang vwithin some molde of greater boare that maie fitte the peece vwhich you carrie vwith you (vwhich vwill bee also a good meanes to remooue all suspicion of art) as that by povring of Leade rounde about them, they may serue in stead of coares to your greater bullets, vwhich vwith a small heate are soone parted in funder. But if you vwould carrie coine, then dip your Angels or Crovvnes in molten Lead that is not ouer hote, and conuey them artlie vwithin some small and feate Leaden vveightes, that may agree vwith the *Auer de Poiz*. Some commende the povnder of Marble, mingled with molten rosen to lap angels or other coine in, before it be through cold. There be also diuerse philosophicall vwayes for the secretting of *Sol* and *Luna*, but those are reserued for higher purposes.

How

4 Howe to keepe or preserue anie fowle or other peece
of fleshi sounde , and sweete for three weekes or one
whole Moneth together , notwithstanding the con-
tagiousnesse of the weather.

M Ake a strong Brine, so as the Water bee ouer-
gluttid with salt, and beeing scalding hote, per-
boyle therein the foylle or flesh which you would
preserue some reanasoble time, that is to say, accor-
ding to the greatnes and grosnesse therof, then hang
it vp in a conuenient place, and it will last a sufficient
time without any bad or ouersaltish taste, as I can te-
stifie of mine owne experience. This I thought good
to publish both for the better preseruation of mut-
ton, Veale, and Venison , vwhereof a great deale in
this lande is yearlye lost , in hote and vnseasonable
Sommers, as also for the benefite of our English Ma-
riners, vvhich are forced sometime to vittaile them-
selues in such intemperate Clymates, vvhile no flesh
vvill last syuer foure and twentie houres together, by
reason that they haue no meanes to make the same
to take salt , which without all question will enter
this way and make penetration verie speedily by rea-
son of the hote and fierie spirite of salt thus prepared.
Some doe vse to perboyle their fowle , after they
haue taken out the garbage, and then do dippe them
in Barrowes greace, or in clarifyed Butter, till they
haue gotten a newe Garment ouer them , and
then they lay them one by one in stone pottes, fil-
ling the stone pottes vp to the brim with Barrowes
greace or clarifyed Butter , wherein they doe pricke
some Cloues, and sprinckle dried salt vpon the
uppermoste face thereof , placing the pottes in
some

some coole roome. Some thinke that fowle being filled ful of good wheat & after buried al ouer in wheat, will keepe good a long time. I haue also heard it verie crediblie reported, that a side of venison hath byn kept sound and sweet one whole month together, by lapping the same in a course thinne cloath, and then couering it with bay salt. *Qre* if it were first perboiled in the aforesaid manner, and then couered with salt as before. I could here adde one line more, whereof euerie letter should be worth an angel to diuers good housekeepers in this Land, but that the same would breed both offense and detriment vnto others, for the which cause onely, I haue thought good to keep the same vnder hatches a little longer.

5. *How to defend fresh Water along time from putrefaction.*

This is performed by the addition of some small proportion of the oyle of Sulphur with it, incorporating them both togither, whereof I haue long since made a sufficient triall. Some commende the oile of Vitriol to the same end: and seeing my penne hath so vnauidesly slipt into an Element of so great necessitie, I wil make the Sea-men a little beholding vnto me at their first watering, which being spent, I must leauue them to their brackish waters againe, vnlesse by the helpe of some distillatorie vessell (wherin as also in diuers other of the same kind and qualitie, I haue found maister Sergeant Gowthronse, the moste exquisite and painfull practizer and performer of our times) they can make separation of the freshe part thereof on Ship-boord. Let the owner, Marchant, or Mariner, hauing sufficient leisure to make his pro-

vision of fresh water, before hee beginne his voyage, prepare his water in this manner. First let him fill eyther some Rhenish Wine flettes, fack buts, or White wine pipes, such as haue beeene sawed through the midſt, onelie with faire water, these halfe tubs hauing tapholes within three inches of the bottome, at the which after the water hath passed his first putrifaction, and is become sweet againe, he may then drawe it from his residence into a cleane Caske, and by this meanes it will last much longer at the Sea than other wise, and yet if there were but two or three handfuls of salt diſſolued in a pipe of the ſame water (vvhich would not much offend either the tast or ſtomach) it would preſerue it much more then the bare preparation of the water will doe in the aforesaid maner. Sir *Fraunces Drake* that *Spaniſh* ſcourge & *Magnæ ſpes altera Troie*, who hath ſought for all the helpeſ which he might, either in his water or his viual, for the better comfort and relieve of his Mariners, in one of the laſt conferences which I had with him, did aſſure me, that the moſt putrified and offensiue vwater that could happen at the ſea, would by 24. howers agitation or rolling vp and downe, becom ſweet and good beuerage. And Captaine *Plat* in whome ſir *Frances Drake* for his good partes did alwaie repoſe great truſt and confidence, did vſuallie carrie certein long and thicke peeces of ſheet lead with him, which he would cauſe to bee hanged by lines at the bung-hole euuen to the verie center of the vefſel, wherby he did attract muſt of the fecicall part of the water, and the Leades would become very ſlimie therwith. This he did with often change and iteration, alwaies clenſing the leades as they grew filthie, and ſo with muſh adoo, he found the water a great deale more pleaſing then

then before. These fewe conceiptes I haue thought good to impart for the benefit of the whole Nauie of England, for the which I haue prouided more daintie cates, then it hath been hitherto acquainted with all, I doe onlie keepe them in my breast, vntill an honest purveyor may bee rewarded with some honest pencion. Qre. what proportion of spirite of Wine, or *Aqua vite* well rectified, will defende water from corruption.

6. A Marchants Compasse, whereby he may knowe vpon what point the wind blowes, in his bedchamber, and in the night time, without beholding the skie or any vane abroad.

Fasten a large vane, to a long yron rod, let the same rise thorough the middest of the roofe or some other part, that may best agree with the roome wherin you mean to place the same, and let the yron steele thereof, come through the seeling of your chamber, and at the end of the rod, let there be a sharpe *index*, that may point vpon a table of wood (which for that purpose must be drawne, with al the parts of the wind vpon it like a mariners compasse) to that wind which bloweth. You must haue diuers staies of yron by the waie as the rodde passeth to keepe it vpright, hauing holes in the midst of them, and wrought with lappets at the sides, wherein to fasten nailes to a long post, which for the same purpose must bee placed within the garret, betweene the seeling of your chamber and the roofe thereof. Note that the *Index* and the edge of the vane must alwaies stand vpon two direct contrarie points.

7. How to feed & fatten Hens, Chickens, Geese, ducks, &c. with diuers other sorts of fowle, in a more cheap manner, then hath as yet beeene made knowne or common to the world.

I Knowe diuers that haue contented themselues, to feed and fatten them with graines onelie, whereof they haue made a great benefit vnto themselues; by reason of the easy price for which they are sold. But if you take the bloud of beasts, wherof y^e Butchers make no great reckoning, filling stone pottes therewith, whose couers may bee full of such holes, as that the flesh flies in sommer time, may easilie get in and out at the same, you shall finde the bloud by meanes of the flie-bloes and putrefaction together, wholie converted into white and glib worms (which the anglers call Gentils) which will fatten them exceedinglie, & make them eate most tenderlie. A Dutch man that first practised this secret in a Noble mannes house of England, (whose fowle for the tendernesse of their flesh, was highlie commended of all his ghestes) had a yea relie stipend of twentie nobles conferred vpon him by his Lord, during his naturall life, for the discouerie of the secret. Yet I coulde wishe, that these wormes did first scourre themselues, either in mosse, lome, or bran, before they were scattered amongst the fowle: And if notwithstanding this helpe, the foode shall seeme offensiue to our weake stomaches, especiallie being made acquainted therwith before hand, then receiuue the same in a better form and in a sweeter manner at my handes, who haue alwaies desired to giue all the grace which I might to any secret of good vse. Boile this bloud with some store of brannew
amongest

amonst it (perhaps graines may suffice, but bran is the better) vntil it come to the nature and shape of a bloudpudding, & therewith feed your soule so fat as you please, and this wil be both a wholsom & a clenly feeding for them. Som commend, carrots, turnips, Parisenips and pompeons, first sodden and then some bran or course pollard mingled therewith. You may feed Turkies with brused acrons, and they will prosper exceedinglie with them. Some to fatten their capons speedily, put them into coopes wherin ech bird hath a feueral roome deuided from the rest, being so straight and narrowe as that the hen or capon may onely feed himselfe and roost therein, not being able to turne his bodie, thereby perswading theinselues that wanting motion and exercise he wil soon growe to be fat and of greace. Some do vse to keepe fowle 2.or 3. daies without meat, til they be exceeding hūgrie, and then they giue them their fill. Others doe soke chippings and other crustes of bread in broken beere, or flatten milk, wherewith they do afterwarde feed their capons: out of al these a good hufwife will easilie choose both the likeliest and the best.

S. How to write a letter secretlie that cannot easilie be discouered, or suspected.

Rite your minde at large on the one side of the paper with common inke, and on the other side with milck, that which you woulde haue secret, and when you would make the same legible, holde that side which is written with inke to the fire, and the milckie letters wil shew bleuish on the other side. Or else rule two papers of one bignesse with lines of an equal distance, make the one ful of glassewindowes, through which you must write your mind vpon a se-

cond paper, the fil vp the spaces with some other idle words: but if all were made to hang togither in good sense it would carrie the lesse suspition. Each friend must haue one of these cut papers to read all such letters as shalbe sent vnto him, & this maner of writing will trouble a good decipherer to bring in to perfect sense. Also you may first write an ordinary letter that may carry some good sense to your friend, but let the lines be wide asunder. Then betwene these lines write your secret letter with gall water onely wherein the gauls haue bin infused but a small time (for if after you haue writte therwith there be any sensible colour left behinde vpon the paper, you must throw away that water and make new.) This being drie and of one colour with the paper, will giue no cause of suspition, & the rather because the letter purporteth a sufficient sense already. Now for the discouery therof, you must dissolve some coppres in faire water. & with a fine calaber pensill first dipped in ſe coppres water, you must artly moisten the interlining of your letter, and thereby you shall make it ſufficiently legible. This is one of the moſt ſecrete waies that I know. But yet the finenſt conceited way of all the rest in my opinion, is ſe close cariage of a letter within a lawne or Cambricke ruffe or handkirchief, which a man may weare for his neceſſary uſe without the defacing of any one letter contained therein. And this ſerueth moſt fitly for a loue-letter, which may without all ſuspition of friends be eaſily preſented in a hākirchief to any gentlewoman that ſtandeth well affected to her ſecretary. There is also a redy way without changing of the Alphabet to write ones mind ſpeedily vpon paper, & yet the ſame not to be deciphered without the helpe of a rolling pinne of the ſame ſcantling with that whereon it was firſt written.

written. But these two latter conceits (for some reasons best knowne vnto my selfe) I may not so boldly impart as otherwise I would,

9 How to brew good and wholsom Beere without anie Hoppes at all.

Ince my profession is this booke is in some sort to Sanotomize both Art and Nature, without any regard of priuate mens profits, whom it may either essentially, or accidentally touch: I am bolde therefore without crauing any leauue to do good, to renue or rather to confirm & ratifie an ancient opinion & practise, which long since in the great dearth and scarcity of hops many Brewers of this land, haue bin forced to put in vse for y better supportation of their weak & declining estates. But because they failed in proportion (without the which there can be nothing cōplete or absolute) they suffered a good conceit to die in the birth. And no maruel then if wormwood notwithstanding it be a simple so highly cōmended of all the anciet & new Herbarists for his great & singular effects in physick, be in a maner vtterly abandoned of all the brewers of our time (except a few y can make a difference betweene 5. s. and 5.li. charge when hops are sold for 50.s. the hundred, seeing as yet not any one of them hath so Clarkly wrought vpon this simple as to couer & hide the taste therof, from y wel mouthed Ale-conners of our cōmon wealth. Which weaknes of theirs because it consisteth wholly in the want of a due proportion betwene the mault & other beercorn in respect of wormwood, I haue thought good to set downe a sufficient direction, for such as are wise and willing to doe good both to themselues and to their Countrie, whereby they may easily euē in one dayes practise attaine to the full perfection thereof

Supposing

Supposing then that your Wormewood is either cut down in the leaf before it be seeded, or being seeded that it is cut into short pecces, whereby there may be made an equall mixture of the whole bulcke together (for you must note that the seeded toppes are much stronger and more oyly then the rest of the leaues or stalkes) make first a decoction of foure ounches of hops with iiij gallons of water (which is the proportion that some Brewers in some sorts of drink doe vse) and when you haue gotten out by ebullition the full strength and vertue of them, keepe the same apart, and begin likewise with some small proportion of Wormewood to the like quantitie of water as before, and when you haue bestowed as much time and fire herein, as you did about the hoppes, then taste each of them by it selfe, and if you finde the same to exceed the first in bitterness, then begin with a lesse proportion of Wormewood, and so reiterate your worke, vntil you haue equally matched the one with the other, then may you safely proceede by the rule of proportion to a barrell, and from thence to a tun, and so to a whole brewing. Neither let the excessiue bitterness of Wormewood in his present taste anie thing dismay you, for if you did but taste the decoction of hoppes onely before the mixture of the ground mault (which doth wonderfully sweeten the same) you would think it a verie vnapt liquor to be wrought vp into so pleasing a drinke as our ordinarie Beere doth shewe it selfe to bee. For it is the Hoppe onclie which maketh the essentiall difference betweene Beere and Ale, and that by allaying of the exceeding lusciousnesse of the mault with his bitternes, whereby both vniting themselves together, become a sauorie and wholsome drinke for mans bodie. Which

may

which may bee as well in euerie respect perfourmed with Wormwood as with the Hoppe, yea and peraduenture with Centuarie, Artichoke leaues, or ~~A-~~loes ~~hipatique~~, as some workmasters haue confidently affirmed vnto me. And though the Hoppe be vsuall in drinke, and the Wormwood onely in medicine, whereby some may happily be perswaded, that it is inconuenient for men that are in health to drinke a medicine continually to their meate, yet let this be a sufficient answere to that obiection, that it is the dose onely that maketh the difference herein. For I can assure you in mine owne experience, and by the expe-
rience of one of the best experienced Brewers of London who yet liueth, that if you giue a double or treble quantitie of good English hoppes, to an ordinarie guile of strong Beere, you shall find the same to be a sufficient preparing to your bodie for the best purgation that shalbe ministred after. And this can one of the right honorable Peers of this lande suffi-
ciently witnesse, who togither with some good part of his retinue, hauing well tasted at a dinner of such Beere, as (by misprision of the Brewer of English hoppes for Spanish hoppes) was so ouerhopped, that both himselfe and the rest of his family that was then about him, were suddenly surprised with a great loof-
nesse. And this is the reason why Venice Turpentine which being ministred in a small dose is giuen for the strengthening of the backe, and to stay the running of the reines, yet if it be taken in ſome quantitie of an ounce at once, it will purge ſufficiently in diuerſe bodies. So then either let there be no more taste of wormwood then there is of hoppes in our drinke, and wee ſhall finde no difference in effects, but ſuch as ſhall com-
mend and grace the wormwood beyond the hoppe,

or else let beere be aduaunced with the hoppe to the bitternesse of wormwood wine, and so we shall finde the hop farre to exceede the wormwood in his maligne qualitie. Neither woulde I haue any man to thinke, that I doe either wrongfully intrude vpon other mens possessions, or presumptuously vndertake a charge which I cannot performe, for I am in by dissent, and haue continued siue yeares in possession at the least, and therefore am not easily to be remoued without a philosophicall action commenced against me. And because you shall farther knowe that I haue some reasonable skill in my trade, I dare vndertake without the helpe of any yeast at all, to bring ywoort either of Ale or Beere to his perfect workmanship (wherin it shall cōtinue at the least either six or seuen daies togither) without any intermission, & that only by a philosophicall stirring vp of the fire of nature which shall extend and spread it selfe *à centro ad circumferentiam*, till it haue digested the whole body to his perfect ripenesse or maturitie. Thus much I haue thought good to publish for ycredite of wormwood, and for the benefite of this Iland in sundry respects, which I shal not need to particularize at this time because they are so commonly knowne to all men. And though I know I may bee ouerweyed either with the Fraunders Merchants, or with the great Hoppe-masters of Englande whose foundation is so deepelic laide, that a fewe loose lines can neither shake nor stirre the same: yet either knowing, or at the least perswading my selfe to maintaine the trueth, before I giue it ouer, I will craue the libertie of the schooles, *quod stat controuersia.* And in the meane time those which will not bee satisfied, of the wholesome and rare medicinable helpes of the one, together with the

the weake and feeble vertues of the other, (which was but a Hedgebirde the other daie, though nowe it bee perking so proudly vpon his poles) I will refferre them to the learned Herbals of Dioscorides, Matheolus, Doctor Turner, Dodoneus, Turnizerus, and therest.

10 Howe to harden Leather so as the same shall last much longer in the suckers of Pumpes then it dooth unprepared.

THIS secret is so necessarie for the whole lande, as that I muste craue pardon of my especiall good friend for the discouerie thereof. Lay such leather as is well tanned, to soake in water wherein there hath beene some store of the filings of yron a long time, or else in the water that hath lien long vnder a Grindstone, into the which such yron as hath beene from time to time ground away, hath fallen, and there setled. This hath beene found to bee a secrete of good vse, by one of the Pumpemakers of our time, and if thou canst pumpe out any better vses of this secrete, take them in aduaantage; and remember where thou hadst them.

11 A conceipted Chaffingdish to keepea Dish of meate long hote upon the Table without any coles therein.

Let the Dish bee somewhat deepe, and cause the Chafingdish to bee made of such shape as may best receiue the same, into the which you may conuey a peece of yron red hote, the same beeing of an apt forme to lie in the bottome of the Chafingdish.

This will continue his heate a long time, and if you haue one other spare iron to heat as the first cooleth, you may keepe any dish of meate warme as long as you thinke good. From this ground did those warming pinnes first spring, which of some are called Froes, and being put into their cases, and those cases wrapped in linnen bagges, doe serue to heate beddes with, and to cast one into a kindly sweat. The like deuice is also vsed by others in conueying of such iron pinnes into hollow boxes of wood first lined inwardly with mettall, and iron chests, either to lay vnder their feete where they vse to write or studie in colde weather, or in their coches to keepe their feet warm. The now distressed king of Portugall caused a paire of wooden soles to bee made for a paire of shooes which he had to sit in, which he would warme at his pleasure with Mars well rubified.

12. Howe to rost meate more speedily, and with lesse fire than we now do in our common maner:

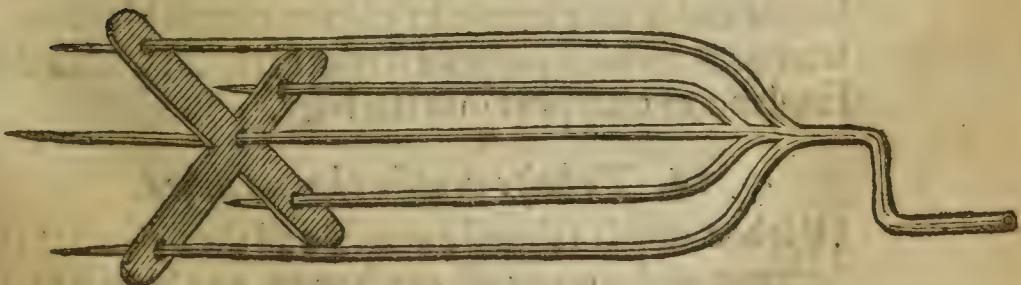
MAKE a square and concave boxe, or else of the fashion of a Cilinder of iron plates, or else of wood lined with those plats long inough and large inough for such and so many ioynts of meat as you meane to rost at once, within which Cilinder let the meat turne as it roasteth. For the reflexion of the heate that is gathered within the boxe will make great expedition. Note that the boxe must onelic couer the meate, because you are to leauc a fire (if neede be) to hang on a pot or kettle ouer the same fire. It must also be close on euery side sauing onely agaynst the fire, and at the sides thereof you must haue slittes to let in the spitte. I haue heard of the like deuise heretofore executed.

executed by an outlandish potter in burnt clay, for the which he had his priuiledge, but his deuice wanted a couer, it was exceeding heauie, very apt to bee broken; and not so strong in reflexion as this mettalline deuise, especiallie if it be kept cleane and bright.

I3. To make a new peece of Walnut tree or Wainscot to be of one selfe-same colour with the old.

First straine walnut rindes well putrified with some liquor, and with a sponge rubbe ouer your wood throughlie well, and after it is drie, rub the same ouer againe with good olde Linseed oile, & it wil become of an excellent brown colour: then if the other wood which you would haue match with it, do much differ frō the new in colour, you must also with fine sand, skoure off all the filth and greace of your olde wood, and then rub it also ouer with Linseede oile. Some take broken beere only. By this meanes I had an old wainescot window, that was peeced out with nevve wainscot by a good workeman, and both becam verie suteable and of one colour,

I4. How to turne 5. spittes at once with one hande, whereby also much fier is saued.



E 3.

Fasten.

Fasten 5. round spittes together, like the teeth or tines of a mole-speare, with a handle in the center of them, let them be placed in a reasonable distance the one from the other, according to the bignesse of the iointes of meat that you vwould roast vpon them, (I take them to be most apt for fowle) you must also haue a crosse of yron, hauing a hole in euerie corner therof, to receiue the ends of these spits, which may be propped with a staic behind that it fall not backeward. Vsing these spits, you shall not neede to rayse your fire vppon such high raunges as otherwise you shall be forced to doe, when one spit is placed directlie aboue another. This secret I haue borrowed out of Pope Pius the v. his kitchin.

15. A probable conjecture at the composition of harde Waxe.

IAm verilie perswaded, that the essentiall part, if not the whole bodie thereof, is made of the gum *Lacca*; peraduenture refined a little, or incorporated with some other apt bodie. For I haue sealed therewith oftentimes, and doe find the same to agree with hard wax; in the perfect taking of the impression of the seale, in the manner of the burning, in the smell, and in brittlenesse. It onely differeth in cleerenes and colour. I haue heard that the Barbarians doe make a bright and orient crimisin colour therewith vppon leather, for which purpose it is greatly sought for in England, to transport into Barbary.

16. To helpe venison that is tainted.

IF it bee much tainted cut awaie all the flesh that is greene, and cut out all the bones, and bury it in a thin

thin olde course cloth a yard deepe in the ground for 12. or 20. houres space, and it wil bee sweet enough to be eaten as I am enformed by a Gentlewoman of good credit, and vpon hir owne practise.

17. How to make a Pistol whose barrell is two foote in length to deliuere a bullet point blank at eight skore.

A Pistoll of the afore said length and beeing of petronel bore, or a bore higher, hauing eight gutters somewhat deepe in the inside of the barrell, and the bullet a thought bigger then the bore, & so rammed in at the first three or foure inches at the least, and after drieren downe with the skowring stick, will deliuere his bullet at such distancē. This of an English Gentleman of good note and for an approoued experimēnt.

18. A peece whereby to performe some extraordinaire seruice either by Sea or land.

Cause a long barrell to be made and of the bore of a Tennis ball, of fiue or sixe foot in length and well stocked, hauing within twelue inches of the mouth thereof, a hooking iron of foure inches in length, forged to the neather part of the peece, by which hooke you may staie your peece by som raile, or other peece of timber, whereby you may safelie discharge the same, without feare of any recoile vpon you. I leauē the full vsē thereof to bee found out by Martiall men. This inuention I hadde of the fine lymner of Lambith, beeing a Gentleman of good conceipt in all ingenious deuises.

To

19. To make greene wood to burne cleere, at the further end of the Ouen.

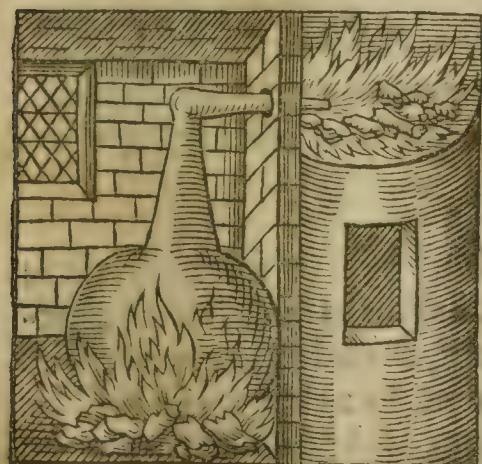
If you burne greene wood in an ouen, it burneth somewhat cleere toward the mouth of the ouen but commonly black & deadish at the further end, wherby the ouen is neuer sufficientlie heated to bake well. You shall find a remedie thereof in this manner. Deuide the mouth of the ouen into foure equall partes, and cause a bar of yron to be made as long or somewhat longer than the mouth of the ouen, & in bredth one exact fourth part thereof. Fasten this bar ouerthwart-wise in the middle point of the ouen mouth, and this will make a partition, betweene the fire and the aier, so as the ayer will passe vnder the bar to kindle the fire, and the flame will issue ouer the barre, and so the smoke which before did choke the fire will also haue his passage.

20. How a man may walke safelie upon a high scaffold or peece of Timber, without danger offalling.

This is easilie performed by wearing of a paire of spectacles, whose sightes must be made so grose, as that he which weareth them may not discerne any thing a farre off, but at hand onely. For it is the sight onely of the steepenesse of the place, that bringeth the feare, and overturneth the braine. By this means I haue heard that the English man which displayed an ancient vpon a scaffold neere the top of the pinnacle of Paules steeple, did helpe himselfe in his desperate attempt.

21. A round ball of Copper or latton, that will blow the fire verie stronglie, onely by the attenuation of water into ayre, which deuice will also serue to perfume with.

MAKE a round ball of Copper or Latten, of y bignesse of a small bowle, soder thereunto a rounde pipe or necke, of three or foure inches in length, and somewhat lesse than a goose quil, at the end whereof, in the manner of an elbowe, soder on a lesse pipe no bigger than a straw, whose vent in the ende may not much exceed the bignes of a pinhole, let al the ioints and sides be sodred with siluer soder, heate the same well in the fire, and then put it into a vessel of cold wa-
ter, and it will sucke some of the vwater vnto it, you may heate the same so often, till by the peize thereof you may bee assured that it is more then halfe full. Then set this ball vpon a few glowing coles, and you shall finde the same to giue a very strong blast against the fire which you mean to kindle, directing the nose of these bellowes towards the same. I make no que-



stion, but that it is possible with a verie small helpe to melt dovvn ei-
ther gold or siluer with these bellowes, and that the same may be made so large as that they wil blow one whole houre together, without anie intermission . If you make a little round ball of siluer in this maner, only with a small and streight pipe, rising out of the bodie therof, you may put some
perfume.

rosewater or some other sweet senting water therin; and therewith perfume your chamber, and by this meanes a small quantitie of sweet water will be a long time in breathing out.

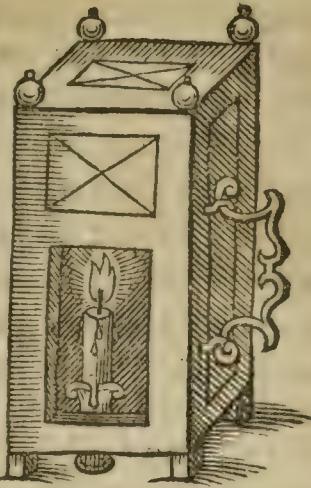
22. How to erect or build ouer any brooke, or small riuuer, a cheape and wooden bridge, of 40. or 50. foote in length, without fastening any timber work within the water.

PEcce the timber work in such sort, as that it may resemble an arch of stone, make the joints strong, and binde them fast with crampes or dogs of iron, let this bridge rest vpon two strong pillers of wood at either end, both being well propped with spurres, & at either ende of your bridge make a strong buttresse of bricke, into the which you must let your pillers and spurres, that by no meanes they may shrinke or giue backewarde, then planke ouer your bridge and grauell it and it will last a long tyme. This is already in experience amongst vs.

23. A cheape Lanterne, wherein a burning candle may be carried, in any stormie or windie weather, without any horne, glasse, paper, or other defensatiue, before it.

MAke a foure-square box, of 6. or 7. inches euerie waie, and 17. or 18. inches in length, with a socket in the bottome thereof, close the sides well either with doue tailes or cement, so as they take no aire, leauing in the middest of one of the sides a slit or open dore, to put in the candle, which from the bottome to the toppe thereof may containe 6. or 7. inches in length,

length, and twoe and a halfe in bredth, place your candle in the socket, and though it stand open and naked to the ayre without any defense, yet the windewill haue no power to extinguish the same. The reason seemeth to be because the box is already full of ayre, whereby there is no roomie or place to conteine any more, neither can the ayre finde any thorough passage, by reason of the closenesse thereof. The socket would be made to screw in and out at the bottom and then you may put in your candle before you fasten the socket. This is borrowed of one of the rarest Mathematicians of our age.



24. How to plom vp a horse, and to make him fatte and lustie, as also howe to keepe a Iade from tiring by the way, and to make him to foame at the bit.

TAke *anula campana*, *Comminseed*, *Turmericke* & *annis seeds*, of each a pennieworth, and seeth them well (with three heades of *Garlike* amongst them well stamped) in a gallon of Ale, then streine it and expresse as much of the substaunce as you may well wring out, and giue your Horse to drinke ther-of bloud-vvarme a full quart at once, then ride him til he be hote, then stable him, litter him well, and currie him vntill hee bee colde, doe the like two or three morninges together, and so turne him to grasse, and he will thriue woondersfullie in a short time. Some commend a handfull of *grunzell* sodden in the afore-

saide ale with the rest of the ingredientes. But if you keep him in the stable, giue him to eat in his prouender the rootes of *enula campana* with some commen seedes both beaten togither, or y *enula camp.ina* sinal shred, for 14. daies together, and it wil make a leane Iade to thriue more in one moneth, then otherwise he would doe in three. And when you ride abroade vpon a hired Hackney, carie a good quantitie of the powder of *enula campana* with you in some leather bag, and when others doe baite their horses in their ordinarie manner, your horse being first well walked, littered, and rubbed, giue him a handfull of this powder in a quart of strong ale with a horne, and tie his head high to the rack, and you need to giue no other or verie little prouender vntil night, then let him bee well meated, and giue him in the morning two penny wvorth of bread, and his ale with the povnder, but wa- ter at night. This a friend of mine yet liuing, did learn of a good fellow that had beene a ranke-rider in his daies, by whose meanes though his hackney tired at Bristow, yet this companion for his better encorage- ment, seeing him out of all heart, by reason that hee was like to lose so good companie as then was gath- red together, he exchaunged Horses vwith him, and brought the Hackney (by the meanes aforesaid) verie quicke and liuely vppe to London. Also if you tie a prettie bunch of Peni-royall about the bit with- in the Horses mouth, the Horse champing thereon, will foaine gallantlie, and trauell vwith muche more courage. Another Gentleman, who also attendeth vpon a verie Honourable personne, tolde me, that whensoeuer hee founde any Iade to tise vnder him, hee woulde presentlie take off his Saddle, and vwith a good quantitie of *Arses mart* (which is an hearbe that

that groweth almost in euerie Ditch and standing Water) rubbe him well on the backe vnderneath the Saddle, and aftervwarde lay a good quantitie of *Arsesmart* vnder the saddle, and so ride him any reasonable iourney. These secrets I thought good to discouer for the benefite of all English trauellers, and I hope they are true because my authours are aliue, and speake of their own experience, and not by bare report from others, they doe also carrie great probabilitie with them. But nowe from the horse to the Rider.

25 A spedie or present drinke which trauailers may make for themselves, (ex tempore) when they are distressed for want of good Beer or Ale at their Inne.

TAke a quart of good water, put thereto fise or six spoonfuls of good *Aqua cōposita*, which is strong of the Annis seedes, & one ounce of Sugar with a branch of Rosemarie, brew them a pretie while our of one pot into another, and then is your drinke prepared. Or if you leaue out Sugar it will be pleasing i-nough. I haue bene crediblie enformed, that diuerse gentlemen of good credit when they trauell abrode, and cannot like the taste or relish of their drinke, that they vse no other then the aforesaide composition, and finde the same both to refresh and coole them verie well, neither are they troubled with the rawnes of colde water, by reason that it hath receiued some correction from the *Aqua Composita*, and that the Annis seedes doe giue a delicate taste vnto it. It were not amisse for all sea-men to carrie some store of *Aqua Vitæ* with them, that when their Wine, Sider, Perrie, and Beere are spent, they may transmuite their water into the said drinke.

TAke of quickesiluer one once, Bole Armoniack of the best two ounces, Camphire half an onnce, common *Aqua vita* two ounces, first beate, and then mingle all these well togither with a pestle in a brazen morter, then annoiint your hands al ouer thrughly well with this ointment, & be sure that your hands are cleane without itch or scabbe. I did see a Dutchman called Haunce, a prety nimble Chimist, who after he had set some lead on the fire in a melting pot, till it became bleuish and exceeding hot, hee stirred the same first with his forefinger vp and downe, pretending to see whether it were not too hot to endure in the palme of his hande, and afterwards telling his fellow that it was of a good temper, he caused him to poure the same out being some half pound in weight into the palme of his hande, first prepared as before, and presently he poured it into his other hand, and so out of one hand into another fise or sixe times together, till in the ende he threw the same cold vpon the ground. This hee did for a pot of the best Beere in a garden in Southwarke about ten or twelue yeeres sithence, in the presence of my self and diuers others, at which time I writ the receipt euuen as I did both see him make it, and vse it my selfe, disbursing the charge both of the Beere, and the ingredients.

*27 How any man may hold a hot iron barre in his hande
without burning his flesh.*

DIppe your hand in molten g'ewe (take heede the glow be not too hot) & presently strew the powder

der of horne burnt to ashes vpon the glew, then dip your hand againe in the glew, and strew more of the said powder thereon. Note that the thicker your bar is, the thicker crust you must make vpon your hande. This I learned of an olde and skilfull man that yet liueth, and assured me that hee had made oftentriall thereof. *Qre.* if this be not a good deuise to defende mantletrees, and other peeces of timber that stande neer the fire from burning. Take an equal proportion of fish-glew, and Alom, mingle them well together, the glew being first dissoluued in wine vineger, then parget ouer whatsoeuer thou wilt with this composition, and throw the same into the fire, and it shall not burne. This out of the secrets of *Wickerus 110.* See *Cardane de rerum varietate. 644.*

28 Sweet and dilitate Cakes made without either Spice or Sugar:

Slice great and sweet Parsnep rootes (such as are not seeded) into thin slices, and having washed and scraped them cleane, then drie them and beate them into powder, searcing the same through a fine searce, (*Qre.* if there might not be som means found out for the grinding of them, whereby to make the greater riddance or quantitie,) Then knead two parts of fine flower with one part of this powder, and make some cakes thereof, and you shall finde them to taste verie daintilie. I haue eaten of these cakes diuerse times, with verie great good liking.

29 How with one candle to make as great a light as otherwise with two or three of the same bignesse.

Cause a round & double Glasse to bee made of a large size, & in fashiō like a globe, but with a great round

rounde hole in the toppe, and in the concave part of the vppermost Glasse place a Candle in a loose socket, and at some hole or pipe which must bee made in the side thereof, fill the same with spirite of Wine or some other cleare distilled water that will not putrifie, and this one Candle will giue a great and wonderfull light, somewhat resembling the Sun beames. Note that this Glasse is not much vnlike to those Wine drinking bolles that haue false bottoms, wherein Sacke, or Claret wine may bee conueyed with faire water onelie in the vppermost part of the Cup, whereby a plaine meaning man may easilie be deceyued. This concept of a Candle, a Gentleman of good account, and my especiall good friend did learne in Venice, where hee was shewed the secrete for a fewe French Crownes. *Qre.* What light a Candle woulde shewe if it were placed in a large Cilinder like vnto a halfe Lanterne, all of Latten kept bright and glistring, the same being inwardly garnished with diuerse Steele Looking-glasses, so artificiallly placed as that one of them might reflect vnto another. I knewe an expert Jeweller, dwelling (whilst he liued) in the Blacke-friers, who had a Glasse with a round bellie, and a flat backe standing vpon a foote, with a Lampe placed so at the backer part thereof, as that the light thereof was iust opposite to the center of the bellie through which (the Glasse being first filled with spirite of Wine) there woulde so brim and glittering light appeare, as that by the helpe thereof he would graue anie curious worke in golde as well at midnight as at the noone day.

30 Howe to make great postes and peeces of timber that
are to be driven into the earth, or piles for water works
to last much longer then otherwise they woulde.

I Haue heard that the Venetians whose houses doe
stand vpon piles of wood, do vse to burne or scorch
the timber in a flaming fire, continually turning it
round with some engine, vntill they haue gotten a
blacke and hard colie crust vpon it, and so they finde
it to last some hundreds of yeares, as it hath beene re-
ported vnto me. A Kentish knight of good woorth
did also assure me, that they vse to burne in this man-
ner the endes or poyntes of their postes, which they
driue into the grounde when they make their pales
and other enclosures. This secret carieth great pro-
babilitie with it, for that by this meanes the outward
part of the wood is brought both to such a hardnesse
and likewise to such a drinessse, *ut, cum omni putre-
factio incipiat ab humido*, for want of moysture and
sappinesse, neither the Element of earth, nor yet of
water can make any penetration into it.

31 To make all the choppes and cleftes of greene timber
to close againe.

Anoint or supple well the greene timber which
you doe expose into the ayre, with the fatte of
powdred beefe broth, and soake it well with sponges
or pensils into the cliftes or choppes thereof, do this
twice ouer, and you shall finde the same to answe
my report. Some Carpenters doe vse to close vp
the great choppes of Wood with Greace and Saw-
dust mingled together, but the first I take to bee the

G better

better way, for that I haue thereby seene the timber
to come so close togither, as if it had neuer bee[n]
windshaken at all, but note that the timber must bee
thus prepared in time, and whilest it is greene.

32 How to graue any armes, posies, or other devise vpon
an egge shel, & how to through-cut the same, with di-
uers works and fancies, which will seem very strange
to such as know not the maner of the doing thereof.

Dippe an egge in suet being molten, first the one halfe, and then the other, holding the same betweene your thumbe and forefinger when you dippe it, let the same coole in your hand, and beeing colde, with a sharpe bodkin or some other instrument of iron, worke or graue in the suet what letters or portraiture you wil, taking away the suet clean, & leauing the shell bare at the bottom of your worke. Then lay this egge thus engraued in good wine vineger or strong alliger in a Glasse or stone Pottinger, for some sixe or eight houres, or more, or lesse, according to the strength and sharpenesse of the Vineger, then take out the egge, and in water that is blood warme dissolue the suet from the egge, then lay your egge to coole, and the woorke will appeare to bee grauen in the shell of a russet colour. *Sæpius probatum.* And if the egge lie long inough in the vineger after it is so grauen, and couered with suet as before, the letters will appeare vpon the egge it selfe being hard sodden, or else if you care not to loose the meate, you may picke out the same when the shell is through grauen, and so you shall haue a straunge peece of worke perfourmed. Those two latter conceiptes I learned of late, but I haue not prooued them, but in all likelihoode they

they should seeme to bee true.

33 An appearance of strange formes in a Glasse.

Grind an Angell weight of fine lease golde, with two ounces of *Sal armoniacke* vpon a marble till you can scarcely discerne any golde, then take two parting Glasses each of them containing a pinte, in the one put the ground golde with foure ounces of good strong water, and in the other glasse put foure ounces of Mercury with eight ounces of *Aqua fortis*, set both these glasses in warme ashes vpon some furnes, till both the bodies be dissoluied, then take a parting glasse of a quart, and whilst the substances being dissoluied are yet warme, poure the same into your quart glasse, but first you must put in your strong wa-
ter wherein the Mercury was dissoluied (I write ac-
cording to the practize which I did see) and then
poure the other water vpon that, and presently you
shal see an extreeme thick blacknesse, which a Dutch
Alchimist and practiser of phisicke that died of y^e last
yeres plague (vpon the discouery therof) wold main-
tain to be that *nigrū nigro nigrius*, so much spoken of
amongst the philosophers, & after a while when the
water began to cleare, then he termed it *cælū christal-*
linū, after that did appeare a continual rising & falling
as it were of flakes of snow which continued certaine
houres, & then as it were a hil al couered with pearle,
& that he called *sepulchrū Mosis*. Al which composi-
tion hauing stood one night, there appeared diverse
spires like blades of corn or grasse but of a whitish
colour in the bottoime of the glasse, yet in the end, by a
reuerberatory furnesse hee turned al this great mat-
ter into a precipitate, and therefore it must needes

bee a Philosophicall woorke that did ende in so great
an *arcantam*. Yet the same if it bee truelie perfourmed
is woorth the beholding, if it were to no other end,
then to put vs in minde of Democritus his *Atomis*,
which concurring together, at length engender bo-
dies. There is a like woorke to bee perfourmed in
siluer, whereby I haue seene seuerall fourmes and
shapes of things somtime to spring vp suddenly, and
somtimes in a night or two, the same somtime repre-
senting trees, shrubs, hedges, and flowers, and diuerse
other shapes, and notwithstanding many practises to
find out the reason of the differences of these forms,
I could neuer yet make any one forme twise, but that
Nature would play so infinitely, and at her owne plea-
sure herein, as though I did obserue a iust proportion
of all the ingredients of this magisterie, yet (because
she found some difference of peize when shee weyed
them in her owne ballance) I had alwayes a seuerall
and differing forme from the last which I made.

*34 A portable ynke to be caried in the forme of a powder
in any paper, leather purse or boxe.*

IN Foster lane or amongst the refiners of golde and
siluer, get a large panne, such as they make their
testes of bone ashes in, it is a deep dish made of burnt
clay, into this put so much of the fattest and best cop-
pres that you can get, set the same vpon a treuet ouer
a reasonable fire of charcole, at the first it will dissolute
into a water, & after by continuing of your fire it will
grow drier and drier, stir the same continually with a
wooden spattle into the midst of the pan, and keepe
it from burning or hardning to the sides of the pan,
and when it is throughly calcined into a whitish
powder

powder and before it become redde, take it from the fire, then weigh out of this calcined coppresse one part, one part of the best gals well powdred, and half a part of the clearest gum *Arabickē* well powdred also, searce them all through a fine scarce, the finer the better, and it will not be amisse if you vse a lawne scarce herein. Keepe this powder in close boxes and in the warmest places of your house, and when you wil write therewith, put some of the powder into a spoone, adding thereunto some water, wine, beere, or vinegar, and stir it well together a prettie while, and when it hath settled a little, you may write therewith, and as it drieth, it will growe blacker and blacker vp on the paper till in the ende it become verie legible. This I haue often proued. Some commend dry Littmas scraped in water, and forced to a solution, wherwith to write in stead of a blew Inke. But I thinke it not amisse, first to dissolute some Gum *Arabick* in the water to keepe your inke the better from sinking. These sortes of inkes are verie good for the sea, because glasses are subiect to breaking, and though you put your inke in leaden pots, yet in time it wil thicken exceedinglie, and then euerie man knowes how troublesome it wil be to the writer. I could here set down some other sorts of inkes that be not common, wherof some will fall from the paper in a few daies, and others would corrode or fret the paper in peeces, but because I know but one good vse of them all, and for that I feare so many bad vses, or rather abuses, would follow if they were known and made common, I will rather seeme ignorant of them, then become an author or helper vnto badde men in their bad purposcs.

35. How to write both blew and redde letters at once, with one selfe-same Inke and pen, and vpon the same paper.

PVt the quantitie of a Hasell nut of Lytmas blewe to three spoonfuls of conduit water, wherin some Gumme Arabicke is dissoluied, and when it hath setled the space of one hower, if you write therewith you shall haue perfect blewe letters, and if you dip a pensill in the iuice of Lymmons, that is drained from his residence, and do wet some part of the paper ther with, and after let your paper drie againe, and then write vpon the place where the iuice of the lymmon was laid, with your former blew inke, the letters will suddenlie become red, and in all the rest of the paper the letters will be blew. And so you may also make partie letters and other fansies, if you wet your paper accordinglie. *Sapius probatum.*

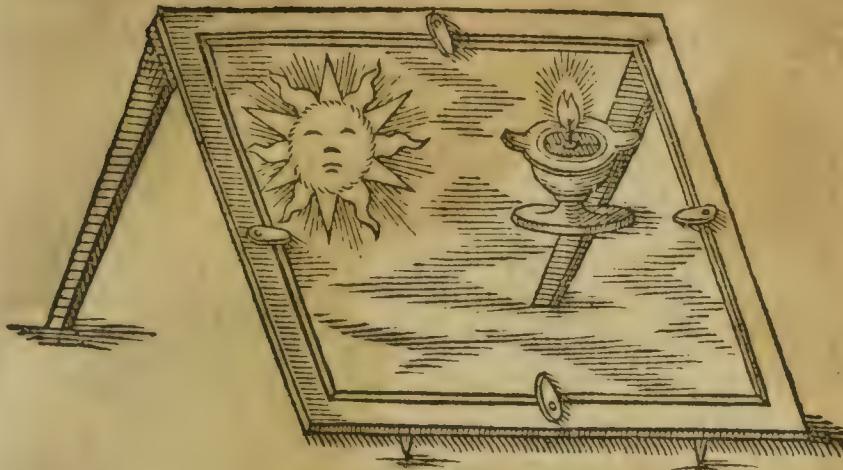
36. To keepe Inke from freezing and moulding.

PVt a few drops of *Aqua vitæ* therein, and then it wil not freeze in the hardest Winter that can happen, and in Sommer time if you put salt therein it will not waxe mouldie as I haue beene crediblie informed.

After writing.

37. How to draw any grose pattern of any Beast, forre, Tree, Fruit, Flower, Personage, or other picture whatsoeuer.

Y^Ou must haue a deske of the clearest and euonest glasse that is to be bought, yet I haue seene our Sussex



Sussex glasse to serue the turne sufficientlie (and som
vse the skinne of an abortiue Lambe, finelie dressed
and streined stiffe vpon a frame) vpon this Deske
you must fasten the patterne at the foure endes with
a little vvax, vpon the which patterne, lay the finest
paper that you can get for money, and wax that also
vpon the patterne as before. Then place your deske
with the back therof against a brim or perfect light,
that hath no other opposit nor side light to hinder it,
and I thinke it best of all against a window where the
sun shineth) and the pattern wil shewe all the linea-
ments thereof very perfectlie through the fine paper,
vpon whiche you may trick, either with a fine poin-
ted cole, blacke lead, or pen. *Qre.* Of a sufficient light
to be placed vnder the deske by seuerall lampes, if
thereby also in a darke night, you may not discerne
howe to performe your worke perfectlie. Some in
steade of this deske doo oyle a paper and lay it vpon
a patterne, and draw thereon with blacke lead, and
then prick the pattern full of holes & so pounce it vp-
on another paper. And some haue paterns of beasts,
birds,

birds, flowers, &c. prickt out in paper, and those they pounce also vpon other paper. And this is a good & readie waie for him that is not skilfull in the Arte of drawing, to garnish any plot which he hath taken of any Manor, parke, close, &c. with Trees, hedges, deer, housinges, &c. But there is a waie by a perspectiue glasse (which because it is consecrated vnto Arte, I dare not profane the same too much by deliuering it into vnhallo wed hands) whereby a young scholler may by one houres demonstration exactlie draw and set downe the lineamentes of any liue personage, Beast, or other fowle whatsoeuer, being placed at any reasonable distance from him, and so of any stately edifice or building, fort, bulworke, or fortification, and of al manner of engines, whatsoeuer the wit of any worke-maister is able either to actuate in the great or to performe in modell onely. Yea al manner of drawne patternes whatsoeuer, bee they neuer so great, may by the helpe of this glasse (wherof I haue gotten the vse at the hand of my deare friend) be lessened and brought within as narrow a Compasse as a man would reasonablie wish or desire. And whosoever shall aduisedlie practise by the helpe of this glas, may in one moneths space be able to drawe any patteorne by hand onely, without praying in aide of the same any more. So likewise it is possible by waie of reflexion, for any man to behold in a looking glasse, and that also in his priuate studie, al the gestures and actions whatsoeuer any personne shall make or performe, in any roome or corner of his house, as also to see euuen in the bottome of his seller, whatsoeuer is done vpon the top of Paules steeple, or any other steeple within London, so as his dwelling bee within the Citie or the Liberties therof, or within any competent

petent number of miles distant from the same. But because I doo see that euerie Author is in danger to be censured according to the particular judgement of euery Reader, and because *Stultorum plena sunt omnia*, I will not extend the credit of this secret to his vttermost bounds, but this shall bee sufficient for the weake faith that reigneth in the world at this time.

38. Some helpe for the speedier and true making and breaking of any letter, as also how a learner may write straight, and giue some prettie grace unto his letters.

For the speedier attaining to any written hand, let some perfect wrighting maister, (and I knowe not whom I shoulde heere commende before mine olde Schoolemaister, Maister *Conradus*, that teacheth oueragainst saint *Anthonies* schoole) deliuere a few copies written, or rather broken in this manner. Let him diuide or breake each letter into so many partes, as he hath cause to make any little pause or addition before hee finish the same, which is nothing else but the vndooing & disioining of the same, that a yong scholler may the better see, which waie the same was made vp and brought togither. As for example, the Secretarie small a, hath six partes before it bee made vppe, the b. c. and d. haue foure and some more, and some lesse, and for the better vnderstanding of my whole meaning, I would haue caused the whole Al-

a. b. c. d. e. f. g. h. i. l. m. n. o. p. r. s. t. u. v. w. x. y. z.

a. b. d. g. o. p. q. s. r. n. v. w. x. y.

phabet to haue beeene cut, and so printed in this manner, but that I could not staie the doing of it, and also for that I knew that maister *Conradus* will sufficiently performe the same with his pen, to any that shall bee willing to requite his paines, and hee hath alreadid written some such coppies for my children. Also it giueth a great grace to your writing, if the whites of certeine letters bee made of one equall bignesse with the o. supposing the same were all round, as the white of the b. of the a. p. y. v. w. x. q. d. g. and s. And for the writing straight, and true breaking of the letters, cause a paper to bee ruled all ouer, with great lines, drawne with a text penne, vpon which ruled paper, you must laie a leafe of the finest paper that can bee gotten, such as they doe commonlie sell for two shillings, foure pence the quare, and let the scholler write vpon the shadowe of the text lines, or else if the neather paper be ruled full of small lines, when hee writeth vpon the fine paper, let him haue care, that those small lines may cut or deuide all those letters which he maketh, in the middest, and hee shall finde great vse thereof. Some draw the letters first in black lead or red inke, and then let their scholler run ouer them with blacke inke, till they haue brought their hande in vre with the shape and fashion of the Letters. There is no doubt, but that some willing and carefull Schollers will finde some of these helpe, as good as the Ace of heartes in their wrighting, thogh other heedleſſe Dones, will scarce make the Ace of Diamonds of the best meanes that any maister or Teacher shall discouer.

39. *A Gall water very necessarie to mingle with your Inke, as it groweth thick in your standish or ink-horne.* Colled with vpon old oysels

Slice or beat some of the best Galles, and put them in a glasse of faire water, and when they haue giuen some reasonable tincture to the water, you may mix the same with your inke as it thickneth: this is a more kindlie waie, then to vse either faire water, beere, or vineger in stead thereof. But when the water beginneth to be ouer olde and out of date, you must then throw away the same and make fresh.

40. *How to renew olde letters, that be almost worn out of sight.* Is done by a goodly Inke.

THIS is performed by rubbing them ouer careful-
ly with the gall water aforesaid being wel prepa-
red, for that will strike a fresh hew again into the old
and outworne Coppres. These two secrets I learned
verie lately of a skilful & well conceipted gentleman,
who hath made some practises thereof himselfe, and
the first I can warrant by mine owne triall.

41. *How to speake by signes only without the uttering of any word.* Whil a chyld shal be able to speake ordynarilie, he shal speake by signes.

Deuise 24. signes, whereof euerie one may repre-
sent some one of the 24. letters, but place your
vowels for the more readines in this manner, First A.
vpon the tip of your thumb on the leſt hand E. vpon
y tip of your forefinger on the ſame hand, & ſo of the
reſt, ſo as when you lay the index or forfingier of your

H 2 right

right hand on the tip of your thumb on the left hand, the party with whom you shal conferre in this maner may alwaies note the same for an A. the rest of the letters which be consonants, may be vnderstood by touching of seueral parts of your body, or seueral gestures, countenances, or actions, as an hem for a B. a crosse made on the forehead for a C. a phillip for a D. and so of the rest. I haue scene a gentleman togither with a gentlewomā that were very ready in their conceited alphabet, to deliuere their mindes each to other in this manner, when as not any of the standers by vnderstood either word or letter of their meaning. And I hold the same a necessarie arte to be practised of such as doo naturallie lacke their speech, whereby they may be vnderstood of others, which otherwise could haue no mutual conference with them.

42 *How to paint or limne with the colours that are taken from hearbs or flowers.*

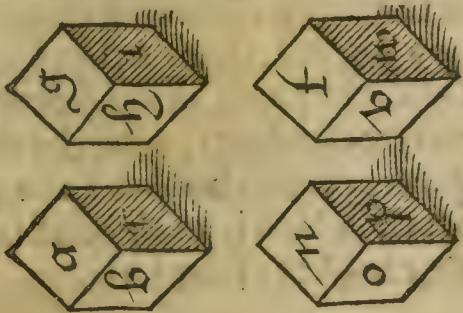
Some drie the leaues of hearbes or flowers, which cartie any deep colour in them, and if there be seuerall colours vpon one leafe, they deuide them, and keep each colour by it self, grinding the same vpon a Marble, and after keepe it in close glasses or leaded pots, sufficiently defended from the aire. If you grind the leaues of a white rose with a little Allome, it will giue a yellow colour, and so wil the purple part of the leafe of the flower delice, ground with a little lime, yeeld a good and perfect greene. Some expresse the iuice of herbs or flowers, and then euaporat either in balneo or in the sun so much as wil ascend, spreding ſt rest thinly vpō the bottoms & sides of small dishes, & after, then ſet ſame in the sun to dry, & then grind it with

with gumme water as they haue cause to vse it. Some infuse the moist, and some the drie leafe with faire water, and so soone as the beautiful hew of the leaues begin to vade, they dreine away the water, and make an addition of fresh leaues thereunto, and so change their leaues often, that they may purchase to them-selues nothing else but the liuelie and bright tincture of euerie hearbe or flower. Those two colours of the Rose, & Flower-deluce I learned of master Bateman sometime the person of Newington a most excellentlynner.

43 A readie way for children to learne their A.B.C.

Cause 4. large dice of bone or wood to bee made, and vpon euerie square, one of the small letters of the crosse row to be grauen, but in some bigger shape and the child vsing to play much with them, and be-

ing always tolde what letter chaunceth, wil soon gain his Alphabet, as it were by the way of sport or pastime. I haue hearde of a pair of cards, wher-



On most of the principall Grammer rules haue been printed, and the schoolmaster hath found good sport therewithal with his scholers.

44 To graue and inlay colours into Sol, Luna, Mars, or Venus, to shew in the nature of an Ammel.

First couer your metall with a crust of waxe, and with a fine sharpe toole when the same is cold, cut out the shape or proportion of what letters or other

portraiture you please and of some reasonable largenesse, then poure some strong water in those emptie places, and when you find them deep inough grauen, mingle Orpiment and Masticke melted togither for a yellow colour, and Vermillion with Masticke for a red, and so of all other colours. Now when your Mastick hath bin molten togither with any of the aforesaid colours, let it coole, and beat the same into powder, and lay of that powder within the grauing, & after lay the metall vpon the fire, til the mastick melt, & it will remain fast and firme therein a long time. This of a few that yet liueth for ought that I know.

45 To make bad paper to beare ynke in some reasonable manner.

Rub your paper wel ouer with the fine powder or dust of Rosen and Sandrach mingled in equall parts before you write therwith. Note that you must tie the powder hard in a rag of Laune or thin Cambrick, and therewith rub the paper throughly well. This is a necessarie secret for students, whereby they may note in the margentes of their bookeſ if the paper ſhould happen to ſinke, which is an eſpeciall fault in many of our late yeere bookeſ of the Law.

46 To make an egge to ſtande upon an ende without any helpe at all.

There is an olde tale of a good workeman who made an egge to ſtand in ſalt vpon an ende, but here the ſame is more artly performed, and yet without any ſuch ſupportation. Holde an egge in your right hande, and with your fist giue three or foure good ſtrong blowes vpon your lefte arme, or

vse anie other deuise by agitation or shaking, vntill you haue broken the yolke, and so made the white to mingle confusedly with it, and then it will presently stand vpon the broad end on an euene table. It should seeme that before the breaking of the yolke, that the yolke did hang playing or tottering within the white, whereby the egge could not be made to stande spee- diliue without this deuise. And yet I heard a Gentle- man whom I dare beleue in a greater matter than this, affirme that hee hath diuerse times caused an egge to stande alone by peyzing it to and fro be- tweene his handes, till in the ende it stooode vpright without anie other helpe. But the first is the rea- dier way.

47 To harden the white of an egge into an artificial gum.

BEATE the whites of diuerse egges into a thinne and cleare Oyle or water, put the same into bladders, and hang them in your kitchin Chimney where a fire is vsually kept in the day time, and in a few dayes the same will become as hard as gum Arabicke. This I haue often proued. Some performe the same in the Sun onely. *Qre.* to what vse this gum will serue.

Multa ouorum albumina simul exagitabis, iis ve- sicas impleas, inde in ollam aqua plenam feruentis im- missas, ac diu cuoqui sinas, detrahe, & per multis dies desiccari curabis loco tamen non puluerulento, & sic la- pidescit ut in vitri duritiem transeat. Wickerus in li- bro de secretis fol. 532. citat. Bap. Port. authorcm istius secreti.

Heere wee may note the diuerse and sundrie effects wrought by the seuerall degrees of syre. We see a continuall whote fire dooth roast an egge till

it become extreeme hard but yet the nature of foode remaining, an intermissiue heat bringeth forth a gum altogether vnsit for nourishment, and a gentle or natural heat engendereth a chicken that is good meat, but not before it hath receiued some alteration by an outward and elementall heat. I will not vrge this philosophicall point of fire any further, onely I wish that he that is a true maister of this element were my maister also for a time.

48 *A cheape Candle or Lampe for the poorer sort to
use in their howses.*

Dip Candleweeke in molten rosen, then wet your hands in water, and after you haue dipped euery weeke, you must stretch it out at length, or streighten it betweene your fingers, and so lay them to coole vpon a halffpace or floore of stone. I thinke the refuse of olde ropes and cordage would be a very profitable weeke for this purpose. This conclusion although it haue beene in some sort already published by meane persons both in towne and countrie, and giuen ouer by the inconuenience of the excessiue smoke onely which annoieth the whole room exceedingly wherin it burneth, yet mee thinkes that during the deare price of tallow candles, the poore might make some shift or other with them, as either by setting the candle within the Chimney, or else in a Candlesticke ouer the mantletree with a large wide tunnell made of wicker, and couered with paper, and hauing an elbow which might passe through some large hole into the chimney whereby the smoke may be auoided. These candles I know will not exceed halfe the price of the woorst weeke candles that are to bee bought.

But

But for those that can content themselues with the light of a Lampe (and I am sure the same will serue for watching Candles , and yet bee much easier in price) let them buy Rape Oyle , which for the moste part is to bee had after two shillinges the Gallon , and therwith maintaine their Lamps , vsing a small weeke of a fewe foldes onelie , or rather a Candle-rush in the Socket of their Lampe , and so they shall finde that one pint of oile wil last them an hundred hours , whereas a pound of watching candles will bee spent in threescore, or threescore & ten houres at the most , and yet they are dearer by one pennie in the pound . Note that the weeke or rush must stande a little sloping in the nose of your Lampe . Or if you would vse your Lampe in steade of a watching candle , and to maintaine a light onely , then may you take a prettie large beere Glassee , placing your weeke vpon a wier , being platted like a trefoile in the bottom , the wier it selfe being first thrust through a litle round flat peece of Leade of the bignesse of a two pennie peece of siluer , to make it stande the steddier . The weeke must be fastened to the wier with a thred of Cotten losely bound about it . When you haue placed this weeke in the middest , then poure in either oile or suet round about it , and so kindle your Lampe , and it will giue some light also through the Glassee . Note that your Glassee may not be too large , least that the week grow to a cole before the Oyle can consume away fast enough to giue it passage vnto fresh weeke thereby to maintaine his light the better . But if you woulde haue your Lampe to last the longer , but to giue no light at the sides , nor greatly at the toppe , then set your Glassee in a deepe Bason or potte of water , thereby to keepe the Oyle the cooler , and so it will

also last the longer. And it is not amisse, nay it is verie requisite to put in some water into your Glasse before you put in the Oyle, thereby to keepe the oile from burning . Neither can I heere omit or passe ouer in silence that one more speciall vse of a Lampe than anie Candle can afforde , which is the saletie of your light from beeing caryed to and fro in the nightime with Rattes and Mise, which haue often tymes set Mattes on fire with the flame of a Candle as they haue sought to conuey it into their Nestes. Neither woulde I willingly studie by anie other Candle, because it continueth so long in one equall light, without giuing that offence to the eye which the Candle dooth by his present blaze after it is newlie topped, and by his dimnesse if it bee not often topped; If it were possible to haue store of that Oyle of Beech-maste (which a late Writer dooth vndertake to produce in great quantitie from the Nutte , and which I haue knowne expressed in England , but not with such yeelde , the difference whereof maie peraduenture bee found in the distinct natures of the English and the Naple Nut) or of that *Oleū Palmae*, which is taken at this daye to bee the Oile that issueth out of the Date tree , the burning whereof is most sweete and delicate in a Lampe, as I can testifie by the triall of sundrie nightes wherein I vsed no other watching Candle in my bedde Chamber. Let this suffice to haue spoken of Lampes for this time, and vntill I may obtaine more leysure and more libertie to lighten a newe Lampe that will giue more light then a Cresset in some of the darkest corners of this lande.

49 Howe to refresh the colours of olde peeces that bee wrought in oyle.

Some vse to beate the dust off them with a Foxe Staile, or with a brush offeathers, and after rubbing them ouer with a Spunge and warme Vrine.. This way was commended vnto mee by master Bateman, sometime parson of Newington , a man whom for diuerse good partes that were in him, I can neuer sufficiently commend. Others rubbe them ouer lightly first with a Spunge and faire water , and after there commeth no more soile then with a spunge and good old Linseed oile, wherin somtimes for the spee-dier drying they do put some burnt Alom or powder of glasse finelie ground. Some do vse first to wash ouer the pictures with sope, and presently after they be drie to vernish them ouer. Note y all this is intended in pictures not vernished before. *Vide postea, num. 72.*

50 An excellent cement for broken Glasses.

Take one part of Virgin-wax, and two parts of the teares or cleare drops of Masticke , and cement therewith. But the better way is if you beat the whitest fishglew you can get with a hammer till it begin to waxe cleare , and then cut the same into verie small and short peeces, suffring the same to dissolute vpon a gentle fire in a little leaded pan with a fewe drops of *Aquavita*. Then let some other that standeth by, hold both the peeces y are to be cemented ouer a chafing-dish of coles till they be warme , & during their heat lay on the dissolved glew with a fine pensil, then bind the glasse with wier or packthred, & let it rest till it be cold:

colde. With this cement I did see a Dutch Jeweller (dwelling then in the Blackfriers, but since departed this world) cement two of her Maiesties christal cups that were brokē. Some cōmend vnsleakt lime, wheat floure, and the white of an egge. Others like fishglew, with *Aqua vitæ* and Ceruse, or with the teares of Masticke, *Aqua vitæ*, and Ceruse. A singular workeman did highly commiende vnto mee Rennish wine, and Isinglasse or fishglew for this purpose.

§ 1 *How to drie gunpowder without all danger offire.*

Although I do not hold this for any great secrete, yet because there hath much mischiefe & spoile of men happened onely by the retchlesse drying of powder, I haue thought it requisite and necessarie in that respect, and for the preuention of all daun-
gers to come, to publish the same. Cause then a ves-
sell either of Lead, Pewter, Latten, or Copper to
be made, hauing a double bottome, betweene which
bottomes you maie conuey scalding water at a pipe,
which water may also bee heated in another roome,
for the more safetie agaynst the fire, and then you
may lay your powder vpon the vppermost bottome
till it bee drie, and when the water beginneth to
coole, you may let it out at a Cocke in the bottome
of the Vessell, and so giue passage for more scal-
ding water into the Vessell by an other Cocke which
may be fastened in the pipe that runneth into the ves-
sell. Or hauing a little pipe in the side, you may from
time to time with a funnell poure in scalding water at
your pleasure, & this is done both with lesse cost, and
also lesse circumstance. I do vse when I would dry my
powder in hast, to heat a fireshouel by discretiō, & thē

Llay

I lay a paper thereon a prettie while, and if I see that the paper burne not nor take fire, then I doe spreade my powder vpon the paper, stirring it vp and downe till it leauie smoking. And this I haue alwaies found to be a verie readie and a safe way. Some dry their powder in a stoue, where no fire can come neere to endanger it.

52. To draw Fish to a certaine place in the night time,
by a light or candle.

PVt so much filed lead into an vrinall as will make it sinke, and vpon the lead strew some hearbes, and vpon those hearbs some glo-worms, couer the glasse with a corke and lute it well, and about the necke of the vrinall tie a string, which must bee put through a great corke that may keepe the vrinall swimming in the water at what deapth you please. Note that with some pipe or quill, you must conuey some ayre into the glasse, for else the glo-wormes will die, and then I thinke their shining brightnesse will vanish awaie, and therefore those perpetuall lights are meerelie fabulos and fantasticall that are drawne from these distilled wormes and Mercurie togither. Some nip or lute a glasse hauing crude Mercurie therein, and so hang it in the water as before. Also a candle helde either euen with the water, or sunke a little way into the water, will amaze and drawe the fishes vnto it, so as if you haue a little hoope net, vpon the ende of a cane or pole, you may easilie take them, and bring them to the brinke-side. All these experimentes are best performed in a darke night.

53. A Bait to catch fish with.

TO halfe a hottie halfe penie white loafe, take one ounce of Coccole seed (Qre. if *Cocculus indiae* be not better) one ounce of Henbane seed finely powdered, temper the same wel with strong *Aqua composita* into a past, then diuide your past into small peeces, of the bignesse of a graine of wheate, and cast in a handefull of them at once, somewhat aboue the place where the fish doe haunt, if it be in a riuier. This serueth especiallie when you see the fish to flote, but for the cheuen you must make your baites as big as cherrie stones, and put them in little coffins of paper, & then throw them vpon the water. This secret I haue not proued.

34. How to drine fish into a Tramell.

Pitch a tramell ouerthwart a riuier where there is good store of fishe, then goe vpwarde against the streme a prettie waie from the net, and as you come downward againe with the streme, throw in some lime stones here and there dispersedlie, on both the sides of the riuier. These vnslaked limestones wil make such a crackling in the water, that no fish dare return backe againe vpon them, but will run forwarde and mash themselues in the tramell. This I had of *John Hester*, one of the most auncient chimists of my time in London, in exchange of one other secret which I disclosed vnto him. Yet some be of opinion, that you must hurle in whole handfuls at once now and then, whereby the fish hearing so great a noise, and tasting the strength thereof in the water, may bee the more affrighted.

35. Diuers good baites to catch fish with.

Fill

Fill a sheepe's gut with smal vnsleakt limestones, and tie the same well at both endes, that no water get therein, and if any pike deuoure it (as they are rauening fish and verie likelie to doe) she dieth in a short time, you may fasten it to a string if you please, and so let it floate vpon the water. Also the liuer of euery fish is a good baite to catch any fish of the same kind. Past made of vvheate flower, a little saffron and some suger, and tempered with water, is a good baite to an gle withall for roche, dase, &c. Also if you gather dunghill wormes, or from vnder a block, and take the earth from them, and put them into fine clean mossie, suffering them to scowre themselues three or four daies therein, the fysh will bite the better at them.

56. *A readie waie to catch Pigeons, and other great birdes.*

Make small coffyns of paper, (such as the Confit-makers vse to put their confites in) not exceeding the length of ones finger, past the sides & endes with some starch, clip the vpper part of them round with a paire of sheeres, then annoit the inside of the vppermost skirts of them round about with birdlime in the forme of a ring, and after you haue procured the pigeons to haunt a place, by making of a shrap a day or two before, lay of these coffyns heere & there with a few peason in euerie one of them a little sloping or declining, and strewe some other peason amongst them. And when the Pigeon pecketh at the peale within the costyn, shee is immediatlie masked or hooded, not seeing which waie to flie. And so you shall fynde verie good sport, and take them easilie.

57. A Worme to catch birds with.

There is a great opinion conceiued of a Worme that hath many feet and is found in a horse-mill, where corne is ground, most commonlie vnder the ground where the horse treadeth, and is exceeding sweet, place this worme with lime twigs about her, where she may be seen, and you shal soone take birds therewith. But I take this rather to bee the worme wherein the Nightingale dooeth so much delight, which is found in a mil-case, or where Bakers vse to boulte their meale.

58. How to catch Pigeons, Crows, Jacke-dawes, and Magpies.

For the taking of pigeons, you must make a shrap three or four daies together, laying loose lines amongst the pease vntill the Doues bee acquainted therwith, then in som euening tie at those lines great store of strings, which with a needle before, you must thrust through the pease, being first sodden softe for the purpose, and at the end of euery string tie a little knot, when a pigeon hath swallowed downe one of these pease, together with the string, she cannot possiblie get it vp againe, but she is easilie taken. Perhaps some other birdes may also be taken in this manner. It is not amisse to hide the thredds neare the pease with grasse, earth or straw, or some such like matter. Also if you throw goblets of flesh or cheese curds abroad in the fieldes where there be store of Rookes, Crows, Dawes, or Magpies, within the which there is conueied some of the powder of Arsenicke or subli-

Sublimate, you shall soone dispatch your barnes and other Garners of corn, of al these wastfull birds. But take heed that none of your hogges doo eat of these dead birds, least they happen to poison them also.

59. How to kil Seapies, Seaguls, & other rauening waterfowle.

Some be of opinion that if in the winter time, you doe streine ouerthwart a riuier or brooke, where fowle doe haunt, some strong line or whipcorde, at the which you may also hang diuers other smaller threads, baited with garbage vpon hookes, of an apt size for them, that so they will hang themselues, and be easily taken. Also for the taking of store of seapies, you may lime some twigs which may be fastened at small fishes, and then laie the same vpon large leaues, so as the lime touch not the water, and the seapie striking at the fish is taken with the lime twigs. And hauing taken one or twoe of them; then clippē their winges and so leauē them in the water, and all the seapies thereabout that are within hearing, wil come to helpe them, and continuallie flie houering ouer them, so as hauing your pecces charged you may discharge at the whole flocke as fast as you can charge, for they wil not be driuen awaie.

60. How to gather great store of Waspes together, so as you may destroy them all.

Some honie put into a pipkin, and the same placed ouer a gentle fire, the windowes of the roome being set open, will by the sent and vapour thereof, draw all the Waspes that are neere the place within

any reasonable compasse, into the roome where you haue bestowed the pot. Note that this must be done in an apt season of the yeare, when as there bee store of waspes, and in some place where they haunt great lie. Also the waspes will soone resort to an earthen pot, wherein there is some raw flesh, and when you haue drawne some store of them together into the pot, then couer it and set it on the fire vntill you haue destroyed them all. This latter secret I hadde out of *Cardanus de rerum varietate, pag. 294.* but the first is more naturall and com naundeth farther off. Also if you set store ofiarre glasses in your Orchard, and about your house, where you see the greatest haunt of them, with some decoction of honie and water, or water and suger, or any other sweet wine or composition in them, leauing these pottes or glasses three partes emptie, they will not forsake these sweete li- quors, vntill they haue drowned themselues therein.

61. How to keepe garments of cloth, or hanginges of Tapistrie, Dornickes, Saie, &c. from moath-ca-
ting.

B

Rush your apparell with an ordinarie brush, and so likwise your hangings, or else you may vse a brush made of a figge frale, vntill you haue gotten all the dust out of them, then brush them ouer throughlie wel twice or thrice euerie yeare as they hang, with a brush made of wormwood tops. And yet I thinke it to be the surer waie, if they were also wel rubbed with wormewood on the backsides. I haue heard that it is an vsuall practise amongst the Italians here in England in summer time to cause great store of Walnut tree leaues to be hoong vpon a thread, so as one may

not

not touch another, and when they are throughlie
drie, then strewe them in their Chestes and Presses,
amongst their cloathes and other furniture of their
chambers and beds, and within the seuerall foldes of
euery garment.

62. To helpe beere that beginneth to soure or is dead.

Some put a handfull or two of ground malt into a
barrell of beere, and stir the same and the beere wel
together, and so make it to worke afresh and become
good againe. Some do burie sower beere 24. houres
in the earth, and thereby recouer it. Others adde new
strong beere to the old, and so the dead beere is for-
ced sometimes to worke againe to a new head. Some
fetch it againe with chalke or lime, and some with
oyster-shels, and some throw a handfull of salt into a
barrell of dead beere. A Ladie in this lande hath al-
waies vsed to put in a handful of ote-meale into euery
barrell of beere, when it was first laide into her seller,
whereby hir drink did alwaies carrie with it a quicke
and a lively tast. It is also very good to tilt your beere,
when the vessel is little more then halfe drawn off, for
so you shall draw your beere good euen to the latter
end.

63. To helpe a chimney that is on fire, presentlie.

When you see the chimny on fire, forthwith get a
large thick blanket or couerlet, and with þ help
oftwoe or three persons, let the same bee held close
both aboue and below vnto the mouth of the chim-
ney, so as no ayre may enter, and if you canne
come easilie to the toppe of the Chimney, couer
the same close also, either with a fitte boorde, or else

The Jewell-house of
with wet woollen cloaths, & so the fire wanting aire
wil presentlie go out and be smothered.

64. To haue store of Seash for the prouision of one sta-
ble, without repairing to the sea for them.

SYr Edward Hobbie (as I haue heard) hath stored
Scerteine dikes in the Ile of Sheppey, with sundrie
kindes of Sea-fish, into which dikes by sluices, he doth
let in from time to time, change of sea-water to nou-
rish them.

65. To make ale or beere to become stale, in a short time.

BOttle ale, or bottle beere, being buried somewhat
deepe in the ground, in a coole or shadie place, be-
commeth stale enough to bee drunke in 48. howers
space, as I haue beene assured by an honest and sober
Courtier.

66. How to steale Bees.

IF you place a Bee-hiue somwhat before swarming
time in the midest of a great beech tree, so close as
that it may not be discerned for feare of stealing, the
Bees wil resort vnto the same, especiallie if it bee first
wel sprinkled within with water and honie.

67. How to make a tallowe candle to last much longer,
then it doth in our vsuall manner.

ANeopolitan hath written, that salt mingled with
oile will make it to double his lasting, but I thinke
the practiser herof wil find it somwhat troublesome to
make a good solucion of salt in oile. For oile is an im-
proper subiect to reteine salt. I haue heard an Irish
practici-

practitioner affirme, that if tallow candles be made about Alhallontide of good stiffe, and presently laide in colde water by the space of 24. houres together, and then hung vp to drie in a coole and windie place vpon their stickes, that by this meanes onely they will last much longer than otherwise they would, and burne also much sweeter. But I am sure that if there be a true counterpeize giuen to a short tallow candle, (such as is vsually called the Goldsmiths candle) and the same afterwards let down betweene ones fingers into the midst of a pale or tub of water, so carefullly, as that the flame be not extinguished in letting the same fal into the water, it wil last as long as two candles of the same length and bignesse, alwayes supporting it selfe aboue the water, by a thin crust or webbe, which it worketh about the flame in the nature of Camphire, which continueth his burning in the water (being once set on fire) vntill it haue wrought a passage or entrie for the water into it selfe.

68 How to tell the iust number of Apples, Nuts, Shillings, &c. as they lie in bulcke togither, how great so euer the heape bee.

Cause the owner of them to dispose of the whole heape in this maner. First will him to lay downe two, then let him double that number likewise, and so continue in the rule of duplation vntill hee can double no longer, laying all the odde ones apart by themselues, then shall you easily ghesse by the present view of the whole number, how many there are in the whole heape. For either they must be 2. 4. 8. 16. 32. 64. 128. &c. and which of these numbers soever it bee, euery reasonable eye will ghesse, the bulk of the one number dooth so much surmount the o-

*The Jewel-house of
ther. The like also may be done in trebling, and now
and then doubling or trebling, the more to obscure
the conceipt.*

69 How to prevent drunkennesse.

DRinke first a good large draught of Sallet Oyle, for that will floate vpon the Wine which you shall drinke, and suppress the spirites from ascending into the braine. Also what quantitie soeuer of newe milke you drinke first, you may well drinke thrise as much wine after, without daunger of being drunke. But howe sickle you shall bee with this preuention, I will not heere determine, neither woulde I haue set downe this experiment, but onely for the helpe of such modest drinkers as sometimes in companie are drawne, or rather forced to pledge in full bolles such quassing cōpanions as they would be loth to offend, and wil require reason at their hands as they terme it.

70 An excellent tent for a Diamond.

BVrne Iuorie in a crusible or melting potte, being close luted, into a blacke powder, then take a little of the fine powder thereof, and mingle it with a few drops of the exracted Oyle of Masticke, and in the setting of the stone you must haue care that it touch not the tent.

71 How to make Oile or Vernish to drie speedily.

THIS is done first by boyling of the oile to the consumption of the one halfe, or one third thereof, and then by the putting in the ashes of the backbones of Shads or Mackerell. Also diuerse Shaddes heades

heades dried in the winde, and hung vp in a darke place, will glister like Glow-wormes.

72 A strong Lee that will fetch out any steyne as also refresh an olde Oyle Picture, and make it verie faire againe.

TAke of the ashes of the Vine one handfull, of white coppres and burnt allom of each the quantitie of halfe a Walnut, put thereto a pint of conduit water, infuse the same vpon the said substances in an Ipocras bagge, & reiterate the water vpon them 4. or 5. times till it grow verie strong, set the said water on the fire, and put thereto the quantitie of an hasill nut of good Sope, then take the saide Lee so hote as you may well endure your hande therein, and after you haue taken off the dust from the picture with some brush or foxe taile: rub ouer the picture with a sponge till it come to a good lustre with the said Lee, and when the colours please you, then with faire water wash off the said Lee againe, and the peece or picture though neuer so olde will become verie fresh. *Qre.* if this secrete do not onely extend to such oily peeces as are not vernished. Some rub ouer pictures or Tables with an Onion cut through the midst. This secrete with the preceedent I had of a Dutch mountbanke, aud they came so hardly from him as if hee had beene extreemly costiffe. *Vide ante a. num. 49.*

73 To helpe Wine that reboileth.

IF anie sweete Wines happen to reboile in the hot part of the Summer / as I haue often seene, and as manie Vinteners to their great losse haue often-times

times felt) then Placentius willeth a little peece or
cantle of Cheeze to be put into the vessell, and pre-
sently a strange effect will follow . *Hoc ex anchora fa-*
mis & sitis. I beleue that the corporation of Vint-
ners would giue twentie pound yearly to haue this
secrete warranted to bee true. For the best remedy
wh ch they haue, is to draw the wine of from the lec
into other cleane caske , thereby perswading them-
selues to coole the wine, and to stay the boyling ther-
of. But after a while the inward fire oftentimes begin-
neth a fresh workmanship, and frustrateth all their la-
bour. I would esteeme him for a learned Vintner, and
worthie to haue the next auoydance of Bacchus his
chaire, that could giue me the true reason of this re-
boiling of wines. But because I haue allotted so great
a place of honour to him that can but shewe the rea-
son onely thereof, therefore I will not presume nor
professe to knowe the cause efficient, but I durst un-
dertake to perfourme the remedie , if I thought my
rewarde would not bee somewhat like vnto his, that
within this few yeares taught diuerse of the compa-
nie how to draw out of a Hoggess-head of wine lees,
10 gallons of cleare wine at the least , which beeing
trickt, or compassed , or at the least mingled with o-
ther wine, hath euer since by diuerse Vintners bee[n]
retailed for wine, whereas before it was wholie sold
for lees to the *Aqua vitæ* men. And this is the reason
why there hath neuer since been the like store of lees
to make *Aqua vitæ* of, as before the discouerie of this
conceit, and that the lees of many Cellors which be-
fore were liquid, are now become stiffe like paste, and
may verie well be wrought vp into the forme of bals.
And if I be not deceiued, the first practize thereof be-
gan in Pater noster row, and within these few yeares,

but I

but I feare by this time , it is a parcell of manie mens
Creede that wil neuer be left til the worlds end. Wel,
the poore fellow got hardly a good sute of apparell
amongst diuerse of them to whom hee disclosed the
secrete, although some one of them could tell which
way presently to raise 30 or 40.li.*per annum* vnto them-
selues. And therefore I see it is no offring of skill in
these dayes to Vintners. But the better course were
to take a Tauerne and get a Hollibush if France were
more open, and a litle more freed of the excessive im-
post, and so to draw wines as artificially as the best of
them. For I can assure you I haue almost the whole
art as it is this day in vse amongst the Vintners, writ-
ten in a prettie volume entituled, *Secreta dei pampinei*.
And if I durst here so boldly as I could , both truly &
largely write of those iumbling sleights , that are to
too often practized in our naturall wines by some of
the Coopers of London, to the great benefite of the
Marchant and Vintner, although themselues, poore
soules , get nothing thereby but the hooping of the
vessels, and now and then a Can of wine for their la-
bours, a man would wonder from whence such great
varietie of iugling should growe or spring, and howe
these plaine fellowes that neuer read their Grammer,
nay scarcely know their A,B,C, should be able to run
through Ouids Metamorphosis as they doe at mid-
night. And yet I cannot altogither blame either the
Cooper, or the Vintners man for practising of these
alterations, transmutations, and sometimes enen real
transubstantiations, of white wine into Claret, & old
lags of Sacks or Malmesies, with malassoes into Mus-
kadels. For we are growne so nice in taste, that almost
no wines vnlesse they be more pleasant than they can
bee of the Grape will content vs , nay no colour vn-
lesse

lesse it bee perfect, fine and bright, will satisfie our wanton eyes, whereupon (as I haue beene credibly enfourmed by some that haue seene the practize in Spaine) they are forced euен there to enterlace now and then a lay of Lime with the Sacke grape in the expression thereby to bring their Sackes to bee of a more white colour into England then is naturall vnto them, or then the Spaniardes themselues will brooke or endure, who will drinke no other Sackes them such as be of an Amber colour. This makes the Vintners to tricke or compasse all their natural wines if they bee a little hard, with Bastarde to make them sweeter, if they pricke a little they haue a decoction of honie with a few Cloues to deceiue the taste, if they be clowdie or not perfect fine, they giue them either the white or the yellow parrell, according to the naturall colour of the Wines, wherein they must vse Egges, Milke, Baysalt, & Conduit water well beaten and laboured together with a stubbed rodde, and then wrought soundlie together with a parrelling staffe, which parrell for the most part in one night (vnlesse the Wines happen to haue a flickering Lee) will cause them to fine, whereby you may presently drawe at certaine. But this is daungerous vnlesse it bee in a house well customed; for that the Wine may not lie too long vpon his parell. And some Wines will not endure long after you haue racked them from their parell. Note the wholesomnesse of these Lees to make *Aqua vite* withall. But when the Wines doe rope or beginne to faile or faint in themselues, either in substanciall or in colour, either by age, by the fault of Caske, soyle, salt water, or other accident, then manie tymes the Vintener is driuen to his hard shiftes, and then hee

hee helpeth himselfe with Allome, with Turnsole, Starch, and with manie other Drugges, and aromaticall ware which hee fetcheth from the Apothecarie, the particulars whereof I coulde set downe and applic euē as they haue beene a long time (till within these fewe yecres) practized in one of the most autentique Tauernes of my time. But my purpose is onely to put some in minde of their grosse night-woorkes which discouer themselues by Cannelight at their Celler Windowes, whishing them to leauē all vnwholesome practizes for mans bodie, least if they shoulde heereafter against my will force mee to publish them to the worlde, I shoulde drawe my Countrey men into such a liking of our Royston Grape, that in the ende they woulde for the most part content themselues with their English and naturall drinke, without raunging so farre for forreine Wines.

74 *The making of a Bragget, which is manie times mistaken for a Muskadell by the simple sort of people.*

P Ut one part of smal Alewoort that is blood warm with one part of clarified Honie according to the maner set downe num. 75. but put no Cloues therein in the clarifying. For the making of one Hogshead of this Bragget which is aboue 63. Gallons, you must take nine Gallons of this clarified Honie, and 54. gallons of strong new ale: when your clarified honie hath stood one day, then mingle the same with your newe Ale in a Hogshead, first filling your Hogshead halfe full before you put in your honie, and then hang this aromaticall cōposition following

in a long slender bag in the midst of the vessell v2. of Cinamon three ounces, ginger three ounces, greins 3. ounces, colanders one ounce, cloues one ounce, nutmegs one ounce, long pepper halfe an ounce, *Cardamomum* one ounce and a halfe, liquerice one ounce, then fil vp the vessell almost full with the rest of the new ale (yet some commend rather the putting in of the spices confusedlie then in a bag) bee sure to haue foure or fiue gallons or more of the same newe ale, to fill vp the hogshead as it purgeth ouer continuallie. There is a lesser hole neere the bung hole in beere hogsheads, which must stande open whilst it purgeth, you must also be carefull in the beginning to giue some little vent to the hogshead whilst it worketh: in three or foure moneths, it will bee readie to drinke. You must haue a hazell sticke of the bignesse of a good cudgell, so great as may well enter in at the round bung-hole, and when your hogshead is about three quarters full, put in this stick, being sawed crosse-wise at the end about one cubite in length, (the Vintners call it their parrelling staffe) as the aptest toole for this purpose. Beat with the said staffe the new ale and the honie togither a good prettie while, & when you haue finished this agitation, fill vp the vessel with the rest, and let it purge as before. If you finde your muscadell too thicke, after it hath stood 3. or 4. monethes, you may take a cane or pipe, made of Tinne plates, that will reach into the midst of the hogshead or somewhat more, stop the ende thereof and make some holes in the sides, and with a funnell you may poure more newe ale into the Cane, and so make it thinner. This Cane is an apt instrument to conuicte any liquor or composition into a vessell of wine without troubling of the same, or turning vppe the lees,

wherby

whereby you may draw the same fine presently.

75 Howe to clarifie honie so that the taste thereof shall
be much altered.

Pvt a gallon of water blood-warme to a gallon of honie, put in your honie first, and with a sticke take the depth thereof in the vessell wherein you boile it, and then put halfe an ounce of beaten cloues bound in a linnen cloth therein, and let them boile with the water and honie on a gentle fire till all the water bee consumed, which you shall ghesse at by the marke on the sticke. Your hony must be pure and simple not mingled with woort, flowre, or other bad composition, euen as it is gathered vpon the breaking vp of the huies. It is a worke of two or three hours, and the elder the honie is the better it serueth for this purpose. You must remember to take away the skum as it riseth. Som boile this honie a little higher to a more consistencie, and preserue fruit therewith in stead of sugar. These two receipts I had of an Oxford scholler, who assured me that hee had often made prooфе therof in the Citie of Oxford, and I know the man to be both of good concept, and verie carefull in the commendation of any secrete to his friend otherwise then may well stand with his owne credite.

76 A Receipt for the making of an artificiall
Malmesey.

Take four gallons of conduit water, into the which put one gallon of good English honie, stirre the honie well till it be dissoluued in the water, set this wa-

seth any skumme take it off with a goose wing or a Skimmer, and when it hath simpered about an hour, then put in a new laid egge into the water, which will sinke presentlie, then continue your first fire without any great encrease, and also your skimming so long as any skim doth arise, and when this egge beginneth to floate aloft and sinketh no more, then put in another new laide egge, which wil sinke likewise, & when that second egge doth also swim aloft with the fyrd egge, let the water continue on the fyre a *Pater noster* while, then take it off, and beeing colde, put the same into some roundelet, fylling the roundelet brim ful. And in the middest of this roundelet hang a bagge, wherein first put some reasonable weight or peize, and to euerie eight gallons of liquor two nutmegges groselie beaten, twentie Cloues, a rase or two of Ginger, and a sticke of Cynamon of a fynger length. Set your roundelet in the sunne, in some hot Leades or other place, where the sunne shineth continuallie for three whole monethes, couering the bung-hole from the raine, and now and then fylling it vppe with more of the same composition as it wasteth. This I learned of an English trauayler, who aduised me to make the same alwaies about the middest of Maie, that it might haue 3. hot moneths togither to work it to his ful perfection. But least this way should happen to faile you, I haue thought good for thy better security, to set down mine owne fansie, for the easier stirring vppe of this Malmesey to his workmanship. Let your vessel bee such as hath alreadie conteined some muste or other liquor that hath wrought therin (for he that knoweth not the vse of a worker is but a slender Artist) stop the same very close and lay it in a conuenient Seller til it haue wrought
suffy-

sufficientlie, but in the working giue the caske vent by degrees, for feare of afterclaps. Or else you may easilie procure the same to worke, by adding of some yeast or ferment vnto it, and setting it warme, according to the vsuall manner of ale and beere.

77. *How to keepe Claret wine, or any other wine good, many yeares together.*

AT euerie vintage you must drawe off almost a fourth part out of the hogshead, and then rowle it vpon his Lee, and after fyll it vp with the best newe wine of the same kind, that you can get. Your caske must be bound with iron bandes or hoopes, and alwaies kept full and tight. I haue heard that an Essex knight vseth this practise; and hath Wine of nine or ten leaues (as they terme it) which is so many yeares olde.

78. *To keepe Wall-nuts greene and moist a long time, so as you may pill the kernell.*

TAKE the stampings of Crabs after the veriuice is expressed from them, lay your nuts therein one by one, so as they touch not one another, and so make stratum super stratum till your vessell be ful, these will last some two or three moneths as I haue beeene credibly enformed by a gentlewoman that hath made prooef thereof.

79. *How to keepe the gloss of Spanish Leather shooes, or buskins, a long time.*

The

THe blacking of a Lampe tempered with the oyle of Almondes or some other sweete oile, is verie good for this purpose. I know a gentleman that doth vse to rub his spanish leather shooes with the backe-side of a peece of freese-leather, but you must haue care to keepe this kinde of leather verie drie. Some maintaine the glosse of this leather, with a peece of black velvet onely.

so. How to helpe smoking Chimnies.

IF the Chimnies bee large, and carrie some good length and breadth with them, then may you erect or builde a false back & sides to your smoking chimnies, so as there may be a distance of three or four inches betweene the olde backe and the new, raise this new worke a foot aboue the mantletree. Warranted by a Gentleman of Ireland, being a great practiser in artificiall conclusions, *Qrc.*

si. Tinder and match of a new kind and sweet.

TAke the light & thin shauings of drie fir boords, light them with a candle, and when they are almost burnt, put them out as you woulde doe Linnen rags, after the flame is past, in a stone pot. Then laie another thin shauing thereon, and with a steele and flint stone strike fire into this tinder, and blow there-in till this new shauing doo kindle and so light your candle, and then put out this last shauing in some reasonable time, and it will helpe to increase your Tinder. This I haue seene a Dutch Ioiner vse oftentimes in the lighting of his Candle. Note here that your match

match and your tinder is all of one substance or matter. Also you may make sweete matches to your ordinarie tinder in this maner. Cut or thwite a number of small Juniper stickes, with sharpe points like picke toothes, and dip them but a little waie, and that very lightly in Brimstone, and when the brimstone is spent the Juniper will burne sweetlie.

82. *An excellent mixture, to make pewter bright
withall and to take out the staines.*

TO a gallon of strong bucke Lee, put halfe a pound of blacke sope, and a reasonable handefull of the dust of Flaunders tile, which you shall make by rubbing one against another. Boile them well together til they become like pappe or birdlime. This will last a whole yeare. You must onely haue care to bestowe good labour vpon the vessel if you meane to vse this scowring.

83. *To defend a Horse from flies in his trauaile.*

STeepe Arsmarte in water, making the water verie strong of the hearbe, and therewith wash your horse before you meane to trauell.

84. *To kill Rats in a Garner.*

BESURE there be no holes in the bottome or sides of your garner, or anywhere else, sauing aboue the boords which you must place shelving wise, or in the maner of a penthouse throughout the garner, about halfe a yard or two foote from the corne, so as when the Rats haue leaped downe into the bulke of corne,

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then

they shall not be able to rise or bolt vp againe before
you haue sped them.

85. How to take away the offence of noisome vaults.

Make the vent thereof vpwarde as large or larger
then the tunnell downward, and carrie the same
vp to a conuenient heighth, for so the offendive ayre
as fast as it riseth hath issue and stayeth not in the pas-
sage

*86. Sweet and delicate dentifrices or rubbers for the
teeth.*

Dissolve in foure ounces of warme water, three or
foure drams of gumme Dragagant, and in one
night this wil become a thicke substance like gellic,
mingle the same with the powder of Alabaster finely
ground and searsed, then make vp this substance
into little round rowles of 4. or 5. inches in length.
Also if you temper roset or some other colour that is
not hurtfull with them, they will shew full of pleasing
veines. These you may sweeten either with rosewa-
ter, ciuet, or muske. But if your teeth be verie scalie,
let som expert Barber first take off the scales with his
instrument, and then you may keepe them cleane
with the aforesaid rowles. And hear by those misera-
ble examples that I haue seene in some of my nearest
friendes, I am enforced to admonish all men to bee
carefull, how they suffer their teeth to be made white
with any *Aqua fortis*, which is the Batbars vsuall
water, for vnlesse the same be both well delaied, and
carefullie applied, a man within a few dressings, may
be drijuen to borrow a ranke of teeth to eate his din-

ner with, vnlesse his gums doe helpe him the better.

87. To helpe either man or horse that is tender in the foote or hoofe, whereby they cannot endure any great trauell.

Let him that trauelleth much and hath this infirmitie, put in each sock before he draw on his hose a new laid egge somewhat groselie broken, and so let him trauell vpon them. So likewise you must put in two egs a little beaten into either hoofe of the horse, and clap cow dung vpon them, and then wrap them well one night that they fal not out, and after you may trauel him any reasonable iourny. This is much vsed in Italie.

88. How to keepe Oysters good 10. or 12. daies.

Some hold opinion that if you barrel them vp whilest they are new and quick at the Sea side, putting some of the brackish water where they are taken amongst them, that so they wil last manie daies good. Qre. Of dissoluing of some salt in fresh water til it bee of one strength with the brackish, which containeth soone eighteenth or twentieth part of salt, peraduenture it wil not be amisse to change your brine now & then. Some pile them vp in smal roundelets with the hollow parts of the shels vpward, casting salt among them at euerie laie which they make. This is a god deuise to send them far into the Countrey, where oysters are deintie and sold by tale.

89. To keepe Lobsters, crayfishes, Prawnes, Shrimpes, &c, sweet and good for some few daies.

THese kind of fysh are well noted to bee of no durability or lasting in warme weather, yet to prolong their daies a little (though I feare I shall raise the price of them by this discouerie amongst the Fishmongers, who onely in respect of their speedy decay doo now and then affoord a penieworth in them) if you wrap them in sweet and course rags first moistened in salt water, and then burie these cloaths in Callis sande, that is also kept in some coole and moist place, I knowe by mine owne experience, that you shall finde your Labour well bestowed, and the rather if you lay them in feuerall cloathes so as one doe not touch the other.

90. An artificial composition, wherwith to make smooth glistering and hard floores, or to plaster wals with.

TEmper Oxe-bloud and fine clay together, and lay the same in any floore or wall, and it will become a verie strong and binding substance, as I haue beene told by a gentleman stranger, who affirmed vnto me that the same is in great vse in Italie.

91. To make parchment cleere and transparent, to serue for diuers purposes.

MAke choice of the finest and thinnest parchment you can get, scrape the same ouer with a knifetill it become verie thin, (but first you must wet it wel in water) then straine it vpon a frame, and fasten it well, and when it is drie oile it all ouer with a pensill, with the oile of sweet Almonds, oile of turpentine, or oile of spike, some content them selues with linseed oile, & when it is thorow dry, it wil shew very cleere, & serue

in windowes in steade of Glasse, especially in such roomes as are subiect to ouerseers. You may draw a nien personage, beast, tree, flower, or coate armour vpon the parchment before it bee oyled, and then cutting your Parchment into square panes, and making slight frames for them, they will make a prettie shew in your windowes, and keepe the roome verie warm. This I commend before oyled Paper, because it is more lasting, and will endure the blustering and stormie weather much better then paper.

92 A profitable and cheape morter for building, wherin either no Lime, or small store of Lime shall bee requisite.

A Wise, wealthie, and ancient Sopeboyler, dwelling without Algate, hath for the better encouragement of others, long since erected a faire and stately edefice of brick for his owne habitation, vpon the good successe whereof he hath also verie latelie built one other house of some charge and good receipt, the morter whereof did consist of two loades of waste sope ashes, one load of lime, one load of loame, and one load of Woolwich sand. So likewise one other of the same facultie, being likewise of good credite and great experiance, hath vsed onelie loame and sope-ashes tempered and wrought together instead of morter, whereby he hath laid both the foundations, chimneys, and their tunnels in his dwelling house in Southwarke, and they haue endured those stormes alreadie which haue ouerturned manie other both new and olde tunnels that hath beene built with the ordinarie morter. It may be that many lime-men, and some of those Bricklayers that are in fee

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with

with them may bende their force against this newe practize, and labour to discredit the same by all meanes possible, but there is no reason that can holde agaynst experiance, nor no malice so great, but that trueth in her time shall bee able to vanquish. And if these three tryals shall not bee thought a competent number to giue credite to a newe inuention, I will vpon reasonable request and warning, backe and confirme them, with threescore more at the least, which I can produce alreadie made and executed within the Citie of London and the Suburbs thereof, insomuch that who soever will take a carefull view of all our late buildinges that consist of Brickwoorke (especially within the Suburbs of the Citie) hee shall finde great store of these waste ashes to be employed in them.

93 A conceipted drinking Glasſe wherein many ſortes of fish will ſeeme to ſwim up and downe.

IN the middest of a good large drinking-glasſe, and of a bole faſhion, let a ſhort piller of Glasſe arife, vpon the which a rounde Globe or Ball of Glasſe muſt be placed, vpon which Ball there muſt bee diuerſe ſortes of ſmall fishes well drawne and limned, then fill the Glasſe either with water, or with white, or Renniſh Wine, and the leaſt motion that can happen, either to the Wine or water, will make the fishes ſeeme to play vp and downe within the Glasſe.

94 Howe to diſſolve golde, or to part it from guilt ſiluer, without melting downe the ſiluer.

Diſſolve

Dissolve some Sal Armoniacke, in some good A-
qua foris, whose fæces (fixes the Goldsmithis vn-
properly tearme then) haue bee[n] first striken down
with some fine siluer, or else still by retort the saide A-
qua foris, from good store of Baysalt first calcined;
set some of this water in a parting glasse vpon warme
imbers, and put therein your guilt siluer, and it will
stand in the forme of a golden water. You may gather
your golde againe either by euaporation of the wa-
ter, and so the golde will settle in the bottome, or else
if you put Mercurie therein it will amalgame with it,
which Mercurie will soone flic awaie in fume, being
put into a Crusible, and leau[er] the Golde behinde. I
doe hold this to bee a verie profitable secrete for the
Goldsmith, vnlesse the Mercurie in the first gilding
of the siluer, doe conuey some part of the Golde so
farre within the siluer, as that the water can make no
sufficient penetration vnto it. For by this meanes all
the charge of testing and parting wil be saued, which
(as I take it) will not bee much lesse then foure pence
vpon euerie ounce. But whereas it hath bee[n] ob-
jected by some Refiners, that by this meanes there
will be much golde lost (especially in such aunciente
plate as hath bee[n] made and perhaps melted down
againe before the arte of refining which is of a *puisne date* was found out, for that this water doth only take
holde of such gold as doth eniron the outside of the
siluer) I holde this to be a weakē objection to dis-
courage any man from the practize of this solution, for
that in such plate as either carieth no touch, or so old
a touch as the buier shal not bee acquainted withall,
he may follow the old refining rules: and in such guilt
plate as hath bee[n] made since the arte of refining
hath

hath first beeene vsed amongst vs (which is the most vsuall plate that is bought and sold in these dayes) he shall finde the same a most beneficall practize, if the first doubt may be salued. Which may easily be proved in one ounce or two of guilt siluer, making a straite obleruation howe much golde was bestowed thereon.

95 Howe to knowe when the Moone is at the full by a glasse of salt water.

IT hath beeene crediblie reported vnto me, that if an ordinarie drinking glasse bee filled brim full, a little before the full of the Moone, that, euен at that instant when the Moone commeth to the full, the water will presently boile ouer.

96 How to melt downe the filings of yron, nailes, or other small peeces of yron with a small fire.

TO three partes of yron put one fourth part of Antimonie powdred, in a crusible or melting pot, set the same in any ordinarie fornesse, and blowe a little with a paire of bellowes, (or else for your more ease you may vse a winde fornesse) and you shall finde the same to melt verie speedily. This way you may easily cast both Musket and Caliuer bullets of yron.

97 How to put seuerall liquors or Wines in one Glasse, without mixing.

TAke a Beere glasse of six or eight inches in height, and being of one equall bignesse, from the bottom to the toppe, then powre therein some faire water, an

an inch or two in height, vpon the which lay a round trencher that is almost equall in compasse with the Glasse. Then out of a long spowted Glasse or pot, poure gently some milke vpon the Trencher, and after that some Rochell or Connyacke white wine, and then some Gascoigne Claret wine, and after Sacke, and so you shall haue each liquor or wine to flore vpon the other without mingling togither, because the fall thereof is broken by meanes of the gentle pouring vpon the trencher. Some holde opinion that the same may also bee perfourmed with a round toste. But I thinke that you must haue a speciall care herein, that the heauiest liquor do lie in the bottoime, and that you proceed from lighter to lighter, so as the lightest or most aereous or fierie bee placed vppermost, for each thing desires to bee in his natu-
rall place.

98 The Art of memorie which master Dickson the Scot did teach of late yeres in England, and wherof he hath written a figuratiue and obscure treatise, set downe briefly and in plaine termes according to his owne demonstration, with the especiall uses thereof.

You must make choice of some large edifice or building, whose Chambers or Galleries bee of some reasonable receipt, and so familiar vnto you, as that euerie part of each of them may present it selfe readily vnto the eyes of your minde wher you call for them. In euerie of these roomes you must place ten seuerall subiectes at a reasonable distaunce one from the other, least the neerenesse of their placing shoulde happen to confound your Memorie. Your subiectes must consist of Decades, whereof the first

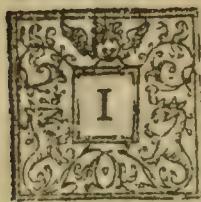
is a man, and the fift a woman , or rather the wife
of that man which beginneth the Decade. And by
this meanes your first, your fist, your tenth, your fif-
teenth, and your twentieth subiect , &c. Both for-
wardre and bacewarde is easily brought to minde.
The rest of the subiects in euerie Decade may be such
as are meerly differing the one from the other, vntesse
you shall like to haue some few of them resembling
the profession of him that beginneth the Decade.
As for example, if you begin with the Souldier, you
may take a Drumme and a Target for two of the sub-
iectes in that Decade. But if you place too manie
subiectes of one nature within one Decade , you will
 finde them verie troublesome to remember. These
subiectes woulde bee such as are most apt either to
bee agents or patients, vpon whatsoeuer you shall
haue cause to place in them . And therefore a fire,
a Dunghill, a Carte, a paire of Bellowes, a Tubbe
of water, an Ape; a Shippe, a night-gowne, a Mil-
stone, and such like, are apt to make your subiects
of, wherein you may place all such thinges as you
woulde remember, and as Maister Dickson tearmed
it, to animate the *umbras* or *ideas. rerum memoran-*
darum. But heerein euerie man may best please his
owne witte and memorie. Now to proceede to
the placing of these tenne subiectes, in their tenne lo-
call roomes; you maie beginne with a Souldier,
whome you may place eu'en in the doore or entrance
confronting with a sterne and warlike looke all such
as shall offer to enter that roome , whereof hee ta-
keth the charge; you maie also imagine him with
Flaske, Touch-boxe, Morion, Peece, Sworde and
Dagger,&c. Because you may happilie haue occa-
sion in the placing of some harde woordes, to vse
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some one of these more fitlie then the other. Your seconde place maie bee your Bed-steed, (if that do happily stande next your doore) at the heade whereof, you maie by a strong imagination place an extreinie burning fire, and at the feete thereof a great and smoaking Dunghill. In your Chimney (if that likewise bee next your bed, and of a competent distaunce from the bedde) you maie imagine a Tubbe full of water. Then in your window beeing the next fitte place you may imagine Bellona staring with her fierie eies, and portraied in all points according to the vvisual description of the Poets. Then vpon your court Cubarde, you may place an Ape with her clogge, and in an other Window (if your Chamber haue two windowes) a Shippe vnder saile with all her tackle. Vpon your Chaire you may imagine a night-gowne furred with Foxe skinne, hauing wide sleeues, and great pockets belonging to the same. Then vpon your Table standing in the middest of the roome, you may place a Milstone, or a Drumme, and in the top of the feeling ouer your Table, a Target, a sword, or a Lute hanging downwarde. And if you want places, you may make either side of your windows to be one, and so of your Chimney. But heere you must haue an especiall care beginning at the doore of your chamber to take the places round about the chamber according as they lie, and that before you fall to the practize of this arte you may perfityly (as your *Pater noster*) remember euery place, and what subiect you haue placed therein; which you shall the better perfourme if you make a full and a liue-lie description of euerie subiecte in your minde before you place the same. Nowe hauing gotten all these subiectes, with their severall places,

ces memoriter & ad vnguem, suppose you are to remember a Cat, a Lute, and a hande, you must alwayes remember to place your first worde whatsoeuer it bee, and howe vnapt so euer it bee in the first subiect, and the seconde woord in the seconde subiect, and so forwarde. And therefore you may imagine your Cat scratching the Souldier by the face, till the blood runne downe his cheeke, he himselfe swearing and staring and strugling with her. Your Lute beeing layde in the fire, you may imagine the same burning to coles, and all the strings cracking in sunder to your great greefe. Then you may imagine for the better remembrance of your third word, a hande raking in the dunghill till it become foule and lothsome in sight. In the like maner you may passe through the whole decade. And if you haue more words or *Capitarerum* to remember then ten, you must beginne with the next decade of your locall subiectes wherein you may place other tenne woordes, and so you may proceede to what number you list, hauing subiectes inough to receyue them. Beholde heere that great and swelling Arte, for the which Maister Dickson did vsually take of euerie Scholler twentie shillings, making one whole Moneths discourse of the Theorique part thereof, but in the practique hee coulde scarcely tell which way to bestowe a full houre in demonstration. And yet to deliuere my censure hereof, according as I haue found therein, I must of necessitie confesse, that although it doe neither answere his great promises, nor the expectation of those his Schollers, whose good opinions he did entertaine so long with such golden hopes in the bettering of their weake memo-
ries, that yet notwithstanding the same is verie suffi-

cient to procure an assured and spedie remembrāce
of any 10. 20. 30. or 40. principall thinges more or
lesse, that we shall take in charge to perfourme, and
therfore verie necessarie for him that is charged with
many errandes, and would discharge them all in such
order as they are deliuered vnto him, as also for the
remembrance of all such pleasant tales and histories
as shall passe in table talke, from conceipted wits. In
which two especial vses, I haue often exercised this
Art for the better helpe of mine owne memorie, and
the same as yet hath neuer failed mee. Although I
haue heard of some of Maister *Dickson* his schollers,
that haue proued such cunning Card-players heere-
by, that they coulde tell the whole course of all the
Cardes, and what euery gamester had in his hande.
So readie we are to turne an honest and commenda-
ble inuention into meere craft and couisenage. And
if there be any that doe either make doubt of this art,
or shal thinke that I haue dealt too compendiouslie
in so large a Subiect, I will according to my ancient
promise, be at al times readie, and that freely, aswell
in this as in any other secret which I haue disclosed
already, or shal hereafter by any publique impression
disclose vnto my Countrey men, be readie to mani-
fest the same by plaine tearmes, or manuel demon-
stration, to their best contentment.

99. How to make proiection, either vpon Mercurie,
Venus, or any of the rest of the base bodies, with a me-
dicine so exalted, as that one shal extend vpon a hun-
dreth, either ad album, or ad rubrum, and abiding
both the touch, malleation and coppell, the golde being
24. Carots high, and the siluer 12. ounces fine.
A multis amatur Alchimia & tamen virgo est.



Coulde neuer yet receiue any sufficient warrant or allowance from the true and ancient chimical Philosophers of al former ages, for the manifesting of so great a secret as I haue now in hande, in any plaine or naked tearmes. And that made Geber to take holde of this Posie, *Secretum tuum non reuelabis cuiquam.* And Comes Treuisanus, dooth so religiouse holde and maintaine the secreting both of the Philosophers matter, their fire, the Colours, time and proportion that is to be vsed in the great worke, as that he breaketh out into this strong coniuration, of al such happie Alchimistes, as haue alreadie accomplished their golden desires in this Art: *Quod si materiam, pondus, aut colores noueris, adiuro te per Deum viuum ne cuiquam reuelaueris.* But because I purpose not to prophane or violate those Sacred groundes of Nature in this discourse, but onely to particularize a fewe proiections, I hope that both my pardon and my fault shal carrie one date, and therefore I will proceed the boldlier in my purpose. It is a worlde to see, how euerie Arte hath gorten his Counterfeite in these daies. Howe Logike is turned into Sophistrie, Rhetorique into flatterie, Astro-nomie into vaine and presumptuous Astrologie, that ancient and diuine science of Alchimie into Ce-mentations, Blaunchers, and Citrinations, ending commonlie either in coosenage, quointage, or in *Capistro*, which made Petrarke to giue a Cauet in these wordes: *Cave Alchimiam, semper rebus aliquid defuerit, dolis nihil.* And againe: *Chimista qui tibi aurum suum spondet, cum tuo auro improuisus aufugiet.* This made Chawcer in his time to play so plesantlie vpon

vpon the Alchimists hollow cole, & this hath made
me to touch or glance at a few other sleights of later
date, therby to admonish al yong gentlemen and o-
thers to take heed of al these mercenarie hirelinges,
Qui cum aliis mille aureos promittant, ipsi drachmam
petunt. Locutus poscit fabulam. A subtile merchant for-
ting himself of late, with an old smokie Alchimist for
his better credit, as they became fellow trauellers in
the higher parte of Germanie togither, lighting by
chance vpon a young crewe of marchants that were
wel monied, and ready for any rich prize that should
be offred vnto them, especially for *Iasons* barke that
was laden with the golden fleece; after some salutati-
on had, and a few words of course enterchangeable
passing betwixt them, this cunning companion of
the alchimists began to parlie with them in this ma-
ner: My maisters and friends, you seeme to be men of
honest parentage and condition, and most happily to
be here met both for your owne good and ours. So it
is, that if you will performe that secrerie which is re-
quisite in so weightie a matter as I am in purpose to
commende vnto you, I will make you the moste
royall Marchantes of the whole Worlde. Neither
shall any of you make the hazzarde or aduenture of
one Deniere, vntill with your owne eyes and handes
you shall haue seene and made a sensible proofe of
this my friendlie offer. It is but in vaine to vse ma-
nie wordes amongst friendes: You shall make a per-
fect proiection your selues vpon Mercurie, *ad omne*
examen; and because my selfe and my partener
will bee free from all suspition of deceipt, you
shall bringe the Crusible, the Coales, and also the
Quicke-siluer with you, and wee will but onelie
deliuer

deliuier you one graine of the medicine which shall extend it selfe vpon a full ounce of Mercurie, which you your selues shall likewise let fall into the crusible. A man would thinke that this were plaine dealing, and that vnlesse these men were wilfullie bent to cosen themselues, that it were impossible, to deceiue so many young eies, that watched so carefully for them selues. But now to the practise. The fire being kindled, one of them setteth on the Crusible by direction of the Alchimist, vnder the nose of a paire of goldsmithes bellowes, who told him that for the better fixation of the Mercurie, there muste a reuerberatorie blast be made now and then with the bellowes, after the Mercurie was once warme in the melting pot. Now this Impostor had before conueied into the nose of the bellowes, an ounce or somwhat more (to supplie that which the Mercurie with his fume should carrie awaie with him) of Sol so subtiliated by often reiteration of *Aqua Regis* vpon it, as that it becam almost an impalpable powder, which when the Marchant by the appointment of the Chimist, had blowne amongst the Mercurie, he was willed to drop in the medicin, being wrapped vppe in a smal paper, and then to leaue the crusible in the fire, vntill the medicin and the Mercurie were both incorporated together, and that the Mercurie were suffici- entlie tincted into Sol, and within one hale hour (af- ter he had first caused them to melt downe an ounce of fine golde in an other crusible, and to put the same to the first worke, for the better fusion of the powder) he willed to be taken out of the fire and conueyed in- to an ingot, and the same being colde became twoe ounces of perfect Sol, abiding both the hammer, the test, and the horne of Antimonie. It is .not to bee doubt-

doubted, but that these yong gallants were right ioyful of this good successe, desiring nothing more then to become Lullistes, offering to exchange their freedome both of the olde Haunce and of the newe, for this multiplying Art. Now this geere worketh like wax, and the Alchimist demaundeth 2000. dollers, for the prouision of coles, furnaces, saltes and Minerals, but especiallie to engrose all the Mercurie, that could be gotten, least either it should rise to an exces-
sive price, or be transported into Spaine, for the refi-
ning of the Indian oare. The money is foorthwith deliuered by weight, because there must bee no time lost in the telling, with a charge to vse all expedition that could be for the gathering of the Mercurie toge-
ther that was to be gotten far and neere. The substāce of this historie is already deliuered, I will not stande long vpon the circumstance. The Alchimist hauing fingered the monie, beginneth to erect furnaces, and enterteineth them with a few distillations, calcinati-
ons and sublimations, teaching them howe to make *Lutum Sapientiae*, *Aquam separationis*, *aquam regis*, *oleum vitrioli*, *salis*, & *sulphuris*, to congeale Mercu-
rie with the spirit of Saturne, to make *saccarum Sa-
turni*, to whiten their teeth withall, to blanch copper with *Arsenick*, to melt one part of Luna with 3. parts of Venus together, and then to forge plate thereof, and by a certen ebullition, to make the same diuerse times to touch equall with our best starling, or higher according to the finenesse of the siluer that was mingled with Venus, all this (with an infinite number of spagiricall experiments) was performed, both to passe away the time without tediousnesse, whilst the Philosophers egge (which required 10. moneths di-
gestion, was hatching in *Cælo philosophorum*) as also

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to gain y more credit with the marchants, wherby a man of these single gifts, might not be feared or mistrusted of his flight, which both he & his companiō were dailie practising, and in the ende finding good opportunitie they put the same in execution, leauing them that had most need to blow at the cole. I doo verelie beleue that if the old D. of Florence were aliuē againe, he would haue outbidden the marchants for this secret, whose distillatorie vessels, furnaces, & other chimicall instrumentes, were all of siluer as I haue heard it often reported. But now to giue a few Items more against these Impostors, before I conclude, Let euery man that is besotted in this Art, and dependeth whollie vpon other mens practises (himselfe not beeing sufficientlie acquainted with those great and hidden Maximes of nature) take heed also of all false and double bottomes in Crusibles, of all hollowe wandes or roddes of yron, wherewith some of these varlettes doe vse to stirre the mettall and the medicine together, of all Amalgames or Powders, wherein any Golde or Siluer shall bee craftilie conueyed, of Sol or Luna, first rubified and then projection made vpon it, as if it were vpon Venus hir selfe: but speciallie of a false backe to the Chimney or furnace, hauing a loose bricke or stone closely ioyned, that may bee taken awaie in an other Roome by a false Simon that attendeth onely the Alchimistes hemme, or some other such like watch-worde, who after the medicine and the Mercurie put together in the Crusible, enterteineth *Balbinus* with a walk and with the volubilitie of his tounyng, vntil his confederate may haue leysure enough to conuey some Gold or Siluer, into the melting potte, which were able to deceiue the best sighted Argus in the world.

By

By these fewe legerdemaynes, I hope many thousandes will be sufficientlie warned, of these wandring & roguing Alchimists, who since the death of Cuckow, Stannie, and Feates, and the rest of that rable, are become the verie Iuglers of the Lande, yea infinitelie worse than they: For that our auncient Iuglers would shewe all their iugling trickes for a groat or a Teastern, and though nowe and then they made shewe to transmutē siluer into Counters, or money out of one mannes hande into an others, yet in the ende, euery man returned with the Coine which he brought in his purse againe, whereas these Rascalles doe not onelie conuert other mennes monie wholelie into their owne purses, but procure also a great losse and expence of time, which might haue beene many waies better, but no way worse employed, and can neuer bee redeemed againe. Wherefore to conclude with Petrarch, *Dic ut ea sibi præstet quæ promittit aliis, primumque suam pellat inopiam. Est enim ferè mendicum genus hominum, cumque se pauperes fateantur, ditare alios volunt, quasi aliena illis quam propria molestior sit paupertas: sic ut miseri se alios misereri dicere soleant impudenter, & ignotis etiam interdum magna promittere: O turpis promissio, & O stulta credulitas.*

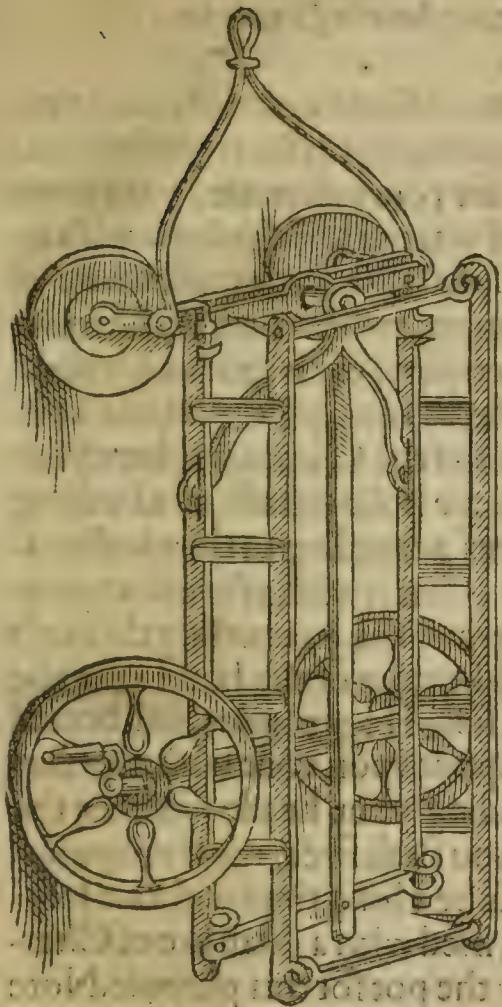
100. Howe to nippe or close a Glasse with a paire of hot tonges, which is commonlie called Sigillum Hermetis.

Place a violl or other glasse hauing a long necke, in a pan of ashes, suffering one inch of the neck only to peer aboue y^e ashes, then lay charcole round about the neck, & close to y^e same (som do also couer the viol

with a round glasse fitted to the mouth, both to keep out the ashes and also the extreame heate of the fire from striking downward into the belly of the glasse, couering also the verie toppe or summitie of the glasse with charcole, two or three inches aboue the same, then make fire at the toppe and let it kindle of it selfe downward, and if that heat be not sufficient, vse also the blast of the bellowes, for you must force the neck of the glasse euen to a heat of fusion, and when it is readie to melt, then nip the same close together with a paire of tongs beeing red hot, which for the same purpose must be kept in a strong glowing fire, and if you can take it in his iust time, you shal close the sam so stronglie, that it is impossible for any ayre to issue out. You may safelie keepe any distilled oile or water in a glasse so nipped. But take heed how you keepe the iuyce of any strong or fierie plant, as also of any decoction that is apt to worke it selfe into a bodie, as new must, or the strong wort either of ale or beere, least you doe not onelie mispend your time, lose your liquor, and breake your glasse, but also get a shrewde turne your selfe, if you happen to be within gun-shot. For there be certain wilde spirits within, who can indure no imprisonment, but if they can find no waie, they will make waie, bearing out before them both locke, bolt, and hinges, and yet they are such as the Philosopher can not want, though the vulgar sorte know no vse of them.

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101 A Wagon to bee drawne with men in steade of horses.



The ioynts and other parts of this wagon are so knit together with hookes & pinnes, as that it may easily bee disioynted and taken in sunder, whereby many of them may be couched in a narrow roome, and will lie close togither in a shipp. It is to bee drawne with six men, whereof two of them muste labour at the fore-carriage thereof, and at either wheele other two, which must woork by winding of the handles, (which are of purpose fastened both to the Nauie of the wheele, and axletree) either forward or backward as occasion serueth. The vse therof is to conney their vittails and other necessaries from place to place when the mariners or souldiers haue cause to land in some countries where the place affoordeth no horse or other beastes that are fit for labour or cariage. I know not the Authoris of this inuention, but because it canis so happylie to my handes, and carieth some good conceipt

with it, I thinke it necessarie to be published amongst
other seruiceable deuises for the sea.

102 A delicate stoue to sircate in.

Put into a Brasse potte of some content, such proportion of sweete hearbs, and of such kinde as shal bee most appropriate for your infirmite, with some reasonable quantitie of water, close the same with an apt couer, and well luted with some paste made of flowre and whites of egges, at some part of the couer you must let in a Leaden pipe (the entraunce whereof must also bee well luted) this pipe must bee conveyed (through the side of the Chimney where your pot standeth) in at a thicke hollow staffe of a bathing tub crossed with hoopes according to the vsuall manner, whereby you may couer it with a sheete at your pleasure. Nowe the stem of the pot passing through the pipe vnder the false bottom of the bathing tubbe which must bee bored full of bigge holes, will breath so sweet & warme a vapour vpon your bodie, as that (receyuing aire by holding your heade without the tub as you sit therein) you shall sweat most temperatly, and continue the same a long time without fainting. And this is performed with a small fire of Charcole maintained ynder the pot for this purpose. Note that the room would be close wherin you place your bathing tub, least any sudden cold shold offend you whilst your body is made open & porous to the ayr.

103 The Arte of refining of Sugar.

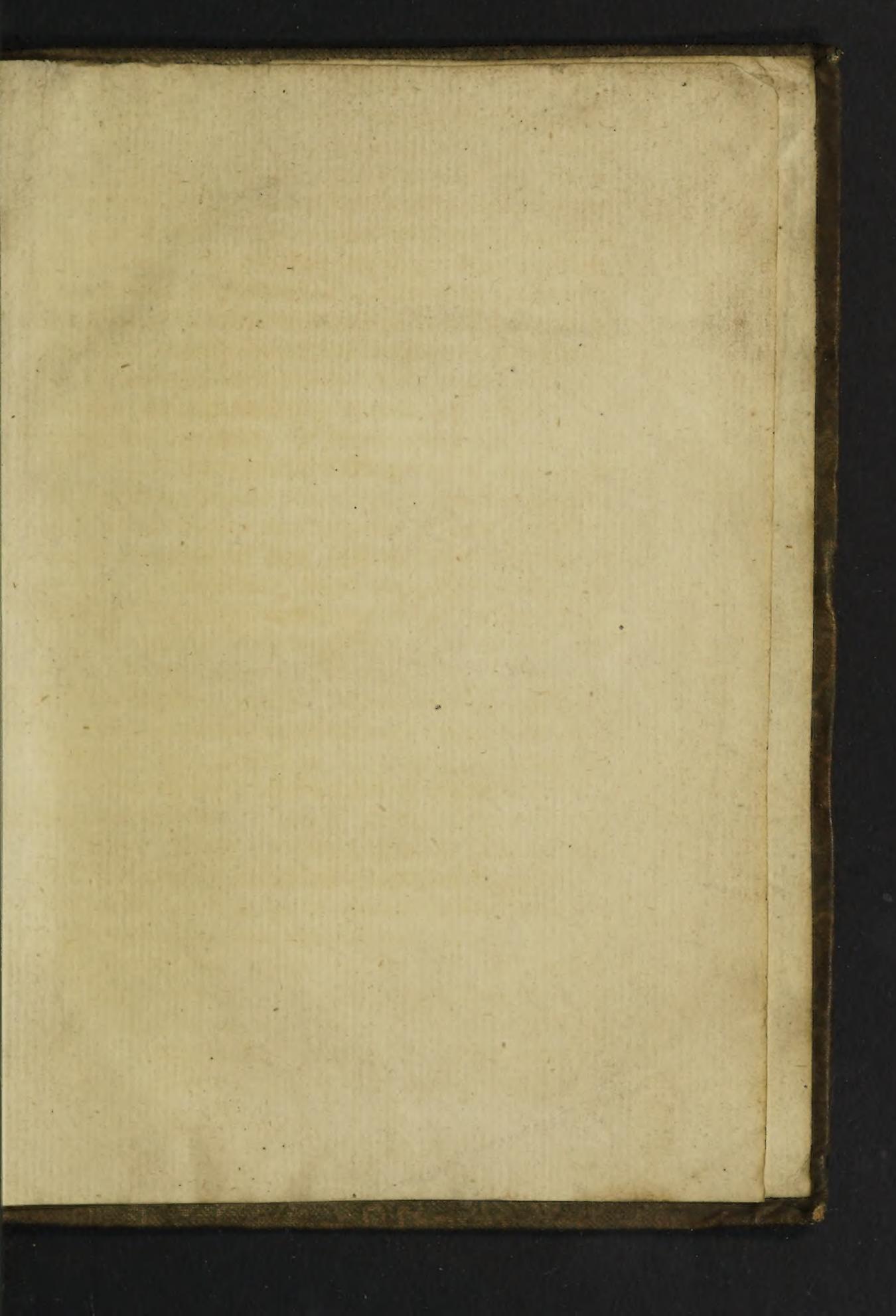
MAKE a verie strong Lee of vnseleckt Lime wherein dissolve as much course Sugar as the Lee will beare,

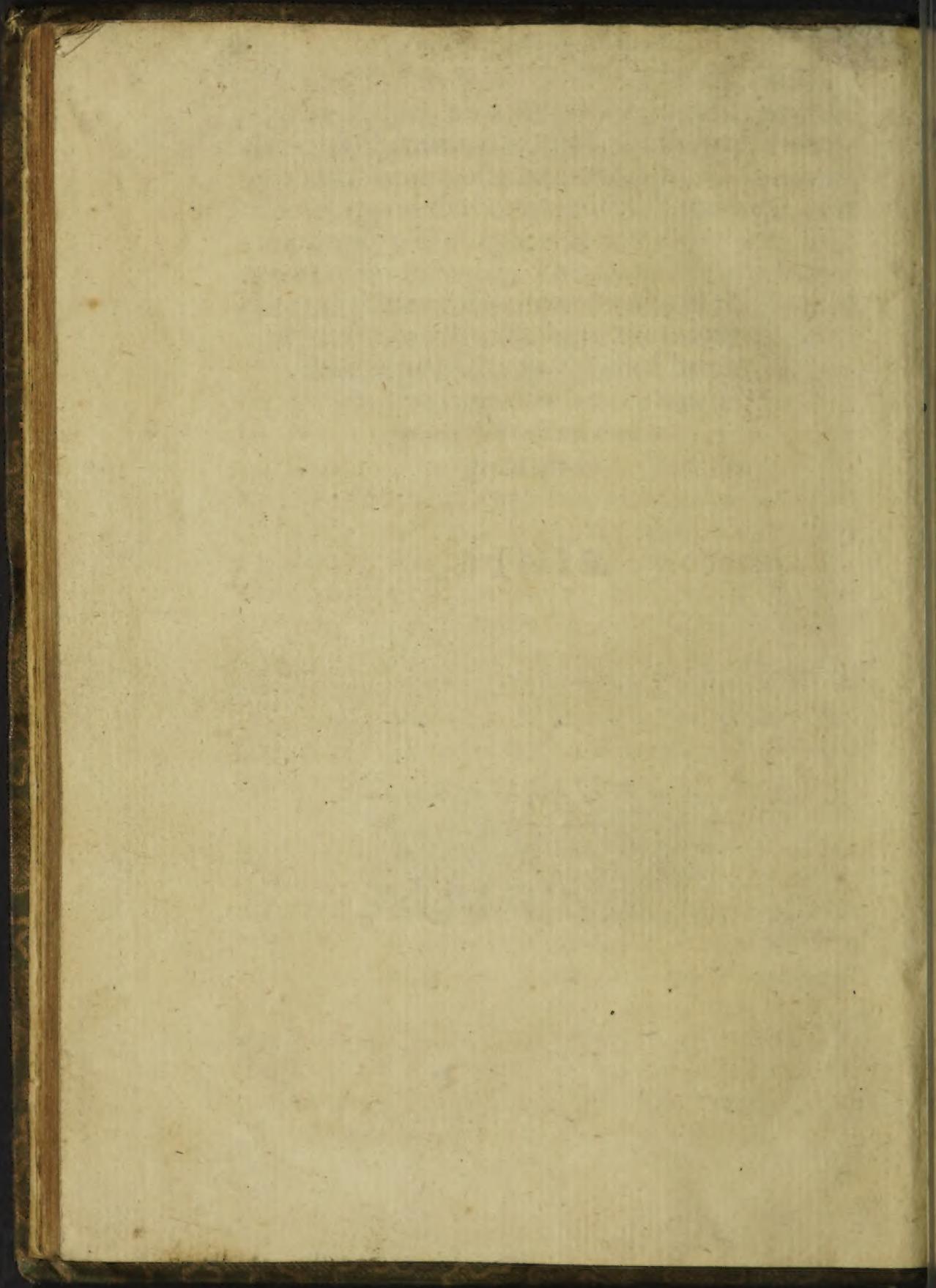
beare, then boyle the same a little, and presently put in the whites of egges first beaten into Oyle, which will make it to giue vp a scumme, which must bee taken away as long as anie ryseth. Then poure all the li- quors through a great woollen cloth bagge, and so the filth will remaine behinde in the bagge, then boyle the liquor againe, till it bee ripe, which you shall knowe by taking two or three droppes of the li- quor and putting them vpon a plate of colde yron, letting it coole, which when it is congealed a little like salt, or as a meane betweene syrruppe and hard Sugar, then take the lyquour from the fire, and poure out the same into the earthen Potte or Moldes made for the same purpose, hauing a hole in the smaller ende which muste bee stopped for one night after, and after that night open it, letting all the substance remaine in the Potte, vntill the syrruppe beginne to leau dropping (iijard the nether Pot wherein the Moldes stande) or droppe verie sloulie at the little hole, this Syrruppe (as I take it) is that which they call *Malassoes*, Then take Potters Claie, and Clay the broade endes of the Potte ouer therewith, and as that Claye sinketh downe by reason of the shrinking of the Sugar, fill them vp with more Clay, repeating the dooing thereof till the Sugar shrinke no more. Then take the Sugar-loaues out of the Moldes, and put them in a Stoue, till they bee drie and harde, and after binde them vppe in Papers ac- cording to Arte. Note that if the Sugar after the first boyling, and beeing powred out into the Moldes, and beginning to congeale, appeare to bee ouer- black or soule, and shall not become white at the first in the same Moldes, but some fecicall part remaine therein,

therein, then it must be newe boyled with Lee in all pointes *ut supra*, till it bee perfectly white. Also the clay must be potters clay, tempered like pappe in wa-
ter, and the saime must runne through a Colander ful
of holes vpon the bottome of the Suger loafe, for
the softnesse of the Sugar will not suffer the pressing
downe of any stiffe clay. This receipt though happily
it want some of the circumstancies in the Arte of
refining, yet it shoulde seeme the matter of sub-
staunce is sufficiently vnfolded herein. I
had the same of a Gentleman of
good Worship and a
great artist.

FINIS.







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